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ITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

V-Block Inspection by NYA Worker in Machine Shop

Photo by courtesy of National Youth Administrat

n this issue . . . Employment Outlook in Full-Fashioned Hosiery Industry • Douglas-Fir Industry • Productivity in Portland-Cement Industry

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HUGH S. HANNA, EDITOR

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CONTENTS

Special articles: Page

Employment outlook in full-fashioned hosiery industry 821

Production, employment, wages, and prices in Douglas-fir lumber industry 849

Productivity in the portland-cement industry 862

Defense activities and conditions:

Professional-personnel requirements of industrial-research laboratories 875

Operating schedules in machine-tool plants, June 1941 876

Executive orders suspending 8-hour day 880

Working agreements for shipbuilding industry 880

Suspension of Saturday half-holiday in Hawaii 881

NYA work program for defense 882

Foreign wartime policies:

Occupational basis of draft deferment in Great Britain 885

Provision for soldiers' dependents in South Africa 889

Employment and labor conditions:

WPA unemployment estimates 893

Work spreading in Belgium 899

Labor problems in British aircraft industry 900

Compulsory State labor service in Norway 902

Social insurance:

Adequacy of State unemployment benefits 903

Unemployment-compensation operations, July 1941 905

Operations of Federal employees' retirement system, 1940 909

Amendment of British social-insurance laws 910

Compulsory social insurance in Peru 912

Employment services:

Placement work of public employment service, July 1941 921

Increased industrial placements of Negroes 925

Housing conditions:

Farm Security Administration defense housing 927

Housing for Negro employees of North Carolina University 930

Cooperation:

Consumers' cooperatives in the Middle West 933

Labor laws and court decisions:

Court decisions of interest to labor:

Peaceful picketing permitted under Sabotage-Prevention Act 941

Union denied injunction against other unions pending certification as employee representative 941

Union agreement to fix prices held void under State antitrust law 942

State court may not enforce order of National Labor Relations Board 943

Compensation to dependents may exceed past contributions 943

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Page

Industrial accidents:

Causes and prevention of injuries in the manufacture of lumber products, 1940 ... 945
Industrial injuries in the mineral industries, 1940 ... 960
Accident compensation for trainees in Canada ... 960

Cost of living:

Living costs in large cities, August 15, 1941 ... 962

Labor organizations:

Growth of Federation of Jewish Labor in Palestine ... 965
Swiss trade-union membership, 1940 ... 966

Industrial disputes:

Recent strikes ... 967
Strikes in June 1941 ... 968
Activities of the United States Conciliation Service, August 1941 ... 980
Activities of National Defense Mediation Board, August and September 1941 ... 982

Labor turn-over:

Labor turn-over in manufacturing, July 1941 ... 984

Wage and hour regulation:

40-cent minimum for women's and children's garment industry ... 989
40-cent minimum for manufacture of men's shirts and allied garments ... 989
34-cent minimum for clay-products industry ... 990
Wage order for seven industries in Puerto Rico ... 990
Regulation of company stores and wages in Bolivian mining industry, 1940 ... 991
Stronger 8-hour law for commerce in El Salvador, 1941 ... 992
Restrictions on wages and profits in Ireland ... 992

Wage and hour statistics:

Earnings and hours in cordage and twine industry, September 1940 ... 995
Earnings and hours in miscellaneous fabricated textile products, September 1940 ... 1012
California—Collection of wage claims by State Labor Office, 1940 ... 1021
British Columbia—Wages and hours, 1940 ... 1023
Canada—Earnings in manufacturing industries, 1938 ... 1024
France—Supplementary allowances for wage earners ... 1027
Germany—Wages in lumber industry in East Prussia ... 1028
Switzerland—Wages in 1940 ... 1029

Building operations:

New dwelling units in nonfarm areas, first half of 1941 ... 1031
Summary of building construction in principal cities, August 1941 ... 1037

Retail prices:

Food prices in August 1941 ... 1042

Wholesale prices:

Wholesale prices in August 1941 ... 1049

Trend of employment and pay rolls:

Summary of reports for August 1941 ... 1054
Detailed reports for industrial and business employment, July 1941 ... 1059

Labor conditions in Latin America ... 912, 991, 992

Recent publications of labor interest ... 1060

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This Issue in Brief

Employment Outlook in the Hosiery Industry.

A severe reduction in employment of full-fashioned hosiery workers is occurring as a result of the stoppage of silk imports and the prohibition of raw-silk processing for civilian purposes. Later, use of nylon and other fibers as a substitute for silk will tend to take up some of the slack, but, unless the market for full-fashioned hosiery expands substantially, technological developments and the extended use of longer-wearing nylon will result in a permanent reduction in employment opportunities. Page 821.

Labor Conditions in the Douglas-Fir Lumber Industry.

The Douglas-fir lumber industry produces over one-fourth of the country's lumber—almost as much as the southern-pine industry, its chief competitor. Employment has been seriously irregular. During August to October 1940 hourly earnings averaged 79.8 cents in Washington and 71.6 cents in Oregon. In December 1940, hourly earnings were 16 percent and wholesale prices 29.5 percent above the 1935–39 averages. This article is based on a cooperative study made by the Bureau of Labor Statistics and other governmental agencies in agreement with employers and workers for use in collective bargaining. Page 849.

Labor Productivity in Portland-Cement Industry.

Output per man-hour in the portland-cement industry increased nearly 150 percent from 1919 to 1940. While 25,300 wage earners were required to produce 81 million barrels of cement in 1919, 24,100 workers produced 130 million barrels in 1940. Production and employment fluctuated widely during this period. The increase in productivity took place without major changes in basic manufacturing techniques. However, many minor technical improvements came into increasing use through construction of numerous new plants and modernization of existing structures. Page 862.

Professional-Personnel Requirements for Industrial Research.

Fifteen percent more professional workers will be needed in industrial research laboratories in July 1942 than in April 1941, according to a survey of 55 such laboratories. The anticipated increase will be largest among chemical and mechanical engineers. Difficulties in recruiting trained personnel are expected in all fields of industrial research but especially among engineers, chemists, and metallurgists. Page 875.

Operating Schedules in Machine-Tool Plants.

Recent expansion of production in machine-tool plants has resulted from enlargement of plant facilities and increased utilization of second and third shifts rather than by increased overtime, according to a survey by the Bureau of Labor Statistics. Practically all reporting establishments were working on multiple-shift operations, the distribution of workers showing 68.6 percent on the main shift, 24.6 percent on the second, and 6.8 percent on the third shift. Page 876.

Unemployment Estimates of WPA.

In August last there were approximately 5,300,000 persons unemployed out of a labor force of 55,800,000, according to the Work Projects Admin-

istration's monthly report on unemployment. These reports are based on visits to a carefully selected sample of households and represent the first attempt in this country to estimate employment and unemployment at short intervals by the sample poll method. The sample, selected at random, covers 54 counties in 38 States. Page 893.

Earnings in the Cordage and Twine Industry.

Average hourly earnings of employees in the cordage and twine industry were 46.8 cents in September 1940. Nearly 16 percent of the workers earned 32.5 cents an hour; 22.3 percent, 32.6 to 40 cents; 27.3 percent, 40 to 50 cents; and 34.4 percent, 50 cents or more. For cotton cordage, hourly earnings averaged 39.7 cents; for soft-fiber cordage, 50.6 cents; and for hard-fiber cordage, 55.9 cents. Page 995.

Adequacy of Unemployment Benefits.

More than 2 years have now elapsed since unemployment-benefit payments were made payable in all the States. Reports covering 11 States, analyzed by the Bureau of Employment Security, show that while the unemployment funds of most States are not only solvent but have increased their reserves, these reserves in some States have been accumulated at the expense of benefit adequacy. Not only have the weekly benefits been small, but the period for which those benefits have been received has been short when account is taken of the total amount of unemployment experienced by some workers. Page 903.

MONTHLY LABOR REVIEW

FOR OCTOBER 1941

EMPLOYMENT OUTLOOK IN FULL-FASHIONED HOSIERY INDUSTRY

By RUTH E. CLEM, *Bureau of Labor Statistics* [1]

Summary

THE Office of Production Management order prohibiting the processing of raw silk for civilian purposes as of midnight August 2, 1941, has resulted in a major economic dislocation of the full-fashioned hosiery industry, the greatest single domestic user of raw silk. Although action was taken immediately to supply manufacturers with substitute fibers, the industry is faced with widespread unemployment, the duration of which is still unknown. During August and September employment in the industry declined 18 percent, or by about 16,000 workers. The prospect is for substantial further declines in the fall of 1941.

From 1919 to 1939, the full-fashioned hosiery industry experienced almost uninterrupted expansion of production and employment except during the depression period. A relatively young industry, its output continued to expand after the depression of the early 1930's. During the decade, 1929 to 1939, there were 29,000 workers added to its pay rolls. By 1941 it appeared to be reaching maturity, for there was a slackening in the expansion of employment opportunities. In April 1941, at the thirtieth annual convention of the American Federation of Hosiery Workers, the union's president stated that employment in the industry had reached its peak and was destined to turn downward in the near future.[2] He attributed this to a combination of current changes in the industry, including the "elimination of many obsolete knitting units, the introduction of nylon with its potential curbing of production, and single-unit conversion." [3] Each of these factors will be discussed at length in the following pages.

[1] Assisted by Richard H. Lewis and Florence L. Schoenberg. Prepared under the supervision of Emmett H. Welch, chief of the Division of Occupational Outlook.

[2] Alexander McKeown, general president, American Federation of Hosiery Workers. See Report of the Officers and Executive Board, Philadelphia, April 28, 1941 (p. 8).

[3] I. e., conversion of existing equipment into single-unit machines which knit the entire stocking.

The present sudden dislocation of the industry, resulting from the silk shortage, can affect the above changes as follows: Much equipment which became obsolete under the ever-growing pressure for more sheer hose may now be revitalized by the introduction of cotton and rayon yarns. If these yarns become available, the scrapping of obsolete machinery will not be a major factor contributing to unemployment for the duration of the silk and nylon shortage. The long-run decline of employment opportunities, however, will probably be hastened by another factor. The present urgent demand for substitute fibers may lead to the rapid expansion of nylon-yarn-productive capacity. In the short run, increased quantities of this raw material would supply much-needed work for the full-fashioned hosiery mills; but in the long run the greater durability of nylon hose may very well result in a reduced total consumption of hosiery.

The current dislocation and resulting confusion have temporarily arrested the technological-unemployment trend because mill owners have suspended such modernization programs as were in progress. While the emergency lasts, manufacturers will probably postpone the installation of labor-saving equipment.[4] If the present emergency is prolonged, unemployed hosiery workers will have to shift to defense industries, thus reducing the labor force attached to the hosiery industry. Foreseeing a labor shortage when normal production is resumed, full-fashioned hosiery manufacturers may be stimulated to reorganize their techniques to the end of achieving reduced labor requirements and lower costs.

To ascertain whether or not the union's prediction of a long-run reduction of employment opportunities is correct and to show in greater detail how its conclusions will be altered by the impact of the silk shortage on the industry, the current situation in the industry must be considered in relation to major trends over the past two decades. With the aid of all data available, those factors pointing to a reduction in the industry's future demand for labor must be analyzed and weighed against forces still existing which in the past have operated to expand job opportunities.

Careful consideration of the various factors operating in the industry leads to the conclusion that not only will there be a severe reduction of employment in the industry, currently, at least part of which will be recovered when the transition to the use of rayon and other fibers as a substitute for silk is accomplished, but that the prospective technological developments in the industry and the extended use of nylon will result in a reduction in longer-view employment opportunities in the industry as a whole unless the market for full-fashioned hosiery shows a substantial growth. Equally important for groups interested in future employment trends is the fact that the full-

[4] For fuller discussion of various types, see pp. 833–835.

fashioned hosiery industry has been relocating in the South. If the past trends toward a shift from the North to the South in the geographical location of the industry continue, the prospect is for a very unfavorable employment outlook for hosiery workers in the northern producing areas as a group; while the outlook for hosiery workers in the southern producing areas as a group is a small reduction, if any, in employment opportunies.

In order to appreciate the complexity of forces at work in the full-fashioned hosiery industry, its basic characteristics should be sketched broadly.

The industry is scattered geographically throughout the East, Middle West, and South Atlantic States, but the majority of the plants are in Pennsylvania and North Carolina. The workers are mostly skilled; 55 percent are women. Although most full-fashioned hose were made of silk until the freezing order of August 1941, nylon has been serving an increasing share of the full-fashioned hosiery market since its introduction in May 1940. Nylon stockings made up approximately 20 percent of full-fashioned hosiery shipments in June 1941.[5]

Full-fashioned hosiery serves 77 percent of the women's total hosiery market, mostly in the higher-price brackets. Its complement in the lower-priced field is seamless hosiery. Differences in the knitting process distinguish full-fashioned hosiery from seamless hosiery. The seamless type is knit on a circular form, whereas the full-fashioned type is knit flat and must be seamed in leg and foot. Full-fashioned hosiery gives a better fit. These two types of hose are interdependent to the extent that the full-fashioned hosiery industry, costs permitting, can always expand its market by invading the seamless field through a lower price policy.

Full-fashioned hosiery is knit on long machines made up of a number of semi-independent knitting sections controlled through a central drive mechanism. As each section knits one stocking, a 24-section machine knits 24 stockings simultaneously. Customarily, two knitting machines are used to knit a stocking.[6] One machine, called a "legger," knits the leg of the stocking down to the heel. Each stocking is then transferred to another knitting machine, known as a "footer," which completes the foot.

As indicated earlier, full-fashioned hosiery is knitted flat and is shaped or "fashioned" by decreasing the number of stitches during the knitting process. The fineness of the stocking fabric is determined by the spacing of the needles on the knitting machine. The "gauge"

[5] This proportion will be increased rapidly in the near future for reasons discussed on pp. 837–838.

[6] With the single-unit machines, as yet uncommon in the industry, the entire stocking is knit on one machine. Recently an attachment has been invented whereby the conventional legger is converted into the equivalent of a single-unit machine. For discussion, see pp. 834–835.

of a machine indicates the number of needles per 1½ inch on the needle bar of the machine, and the higher the "gauge" the sheerer the stocking that can be knit on a machine. Stockings knitted on high-gauge machines have finer loops and are knitted of finer threads than the coarser stockings produced on lower-gauge machines.

A supplementary report, available upon request, will be issued in the near future containing more complete information than does this article, particularly in regard to the description of the characteristics of full-fashioned hosiery workers and their jobs, of the migration of the industry to low-wage areas, and of past trends in the industry.

Major Trends of the Past [7]

In the initial period of growth of the full-fashioned hosiery industry in the 1920's, prices and profit margins were very high, making the industry an attractive field for investment. Equipment expanded at a rapid rate. Job opportunities for persons having the requisite skills were numerous, reaching an average level of 68,000 in 1929. Between 1919 and 1929 the annual production of full-fashioned hosiery increased from 7½ million dozen pairs to nearly 32 million dozen pairs, and there was no difficulty in marketing this greatly increased output. American women had consumed on the average less than 2 pairs of full-fashioned stockings per capita in 1919. By 1929 the average per capita consumption had risen to nearly 8 pairs (table 1).

Particularly notable was the great spurt in production in the last 4 years of the decade. Indeed, the annual rate of increase between 1925 and 1929 was the highest ever attained. Major style changes and the general business boom made possible this rapid expansion. Short skirts made full-fashioned silk hose enormously popular. Although less durable than cotton, the beauty of silk hose attracted all who could afford them, while the capacity of the full-fashioned stocking to hold its shape gave it a tremendous advantage over seamless hosiery in appearance. Emphasis was placed on different colors to match various costumes. Very important was the vogue of sheer silk hosiery and the shift away from service weights with superior wearing qualities. In addition, there was a tendency, even in the predepression years, for the price of full-fashioned hosiery to decline gradually. The tendency was abetted by the continuous fall in the price of raw silk in the 1920's. By 1929 raw-silk prices were at just about half their 1919 level.

Despite these apparently favorable conditions, it was evident to at least one authority that the expansion of productive capacity was proceeding at a faster rate than the increase in demand.[8] Between

[7] More detailed data on this subject will be given in a forthcoming report.

[8] Taylor, George W.: Significant Post-War Changes in the Full-Fashioned Hosiery Industry, Philadelphia, University of Pennsylvania Press, 1929.

1919 and 1929, a total of 13,111 new knitting machines were imported or produced, a 540-percent increase in equipment, compared to the 320-percent increase in hosiery production during the same period. Effective utilization of the expanding capacity required further inroads into the seamless-hosiery market, and this appeared impossible without a substantial price reduction. Despite the gradual lowering of full-fashioned hosiery prices, the difference in price levels was still great. In 1929 the average value per dozen pair of women's full-fashioned hose was $9.86 as against $3.25 per dozen for women's seamless hosiery.[9]

Lower prices would mean reduced profit margins unless costs could be cut. Yet, since the industry was still enjoying comparatively high prices and substantial mill margins, there was no strong impetus to initiate the necessary changes. It was not until the drastic deflation of the early 1930's that manufacturers were forced to undertake any substantial program of cost reduction.

TABLE 1.—*Production of Full-Fashioned Hosiery, 1919–40*

Year	Total full-fashioned hosiery production		Production of women's full-fashioned hose	
	Amount (million dozen pairs)[1]	Indexes (1929=100)	Amount (million dozen pairs)[2]	Average annual per capita consumption (pairs)[3]
1919	7.6	23.8	6.3	1.8
1921	8.4	26.3	[4]	[5]
1923	11.2	35.1	[4]	[5]
1925	13.9	43.6	12.3	3.4
1926	[4]	[4]	15.8	[5]
1927	21.0	65.8	19.8	5.3
1928	[4]	[4]	23.6	[5]
1929	31.9	100.0	31.1	7.6
1930	[4]	[4]	29.1	[5]
1931	29.5	92.5	28.7	7.0
1932	[4]	[4]	30.5	[5]
1933	31.9	100.0	31.6	7.4
1934	[4]	[4]	30.4	[5]
1935	36.4	114.1	36.2	8.3
1936	[4]	[4]	36.5	[5]
1937	40.2	126.0	40.0	9.0
1938	[4]	[4]	41.4	[5]
1939	[6] 48.1	150.8	[6] 47.9	10.4
1940	[4]	[4]	41.9	[5]

[1] Data from Census of Manufactures.
[2] Derived from a variety of sources: Biennial Census of Manufactures for odd years; 1926 and 1928 estimated by applying the percentage increases between 1925 and 1926, and between 1927 and 1928 shown in the monthly reports of the Department of Commerce to the Census of Manufactures figures for 1925 and 1927, respectively; Recent Changes in Hourly Earnings of Employees in the Hosiery Industry, by George Taylor and L. P. Goodman, Philadelphia, 1936, data on 1930, 1932, 1934; and National Association of Hosiery Manufacturers, Quarterly Statistical Bulletin of the Hosiery Industry, February 1941, for data on 1936, 1938, 1940.
[3] Based on females over 10 years of age in the continental United States. The production figures were adjusted for exports of women's full-fashioned hosiery.
[4] No data.
[5] Not computed.
[6] The National Association of Hosiery Manufacturers estimates the total production at 44,000,000 dozen pairs and the production of women's full-fashioned hosiery at 43,800,000 dozen pairs.

After 1929, the drastic deflation of prices and profit margins led to a series of major readjustments within the industry. Each manu-

[9] Census of Manufactures, Knit Goods, 1929.

facturer sought to reduce costs in order to assure some return on capital invested. Methods used included volume sales through lower prices, wage cuts and relocation of plants in low-wage areas, technological changes, and intermittent operations. Some of these measures led to unemployment during the worst of the depression years, but with the introduction of the NRA code in July 1933, the downward trend in employment was checked.

Indicative of the extent of the drastic price decline in full-fashioned hosiery was the 53-percent drop in the Bureau of Labor Statistics wholesale price index between the year 1929 and the low point 1932. The average value per dozen pairs of women's full-fashioned hosiery, as shown by the Census of Manufactures, fell from $9.86 in 1929 to $5.12 in 1933—a decrease of 48 percent. In 1932 and early 1933 full-fashioned hosiery retailed as low as 39 cents and 49 cents per pair. These extremely low price levels were directly related to the intense price competition of the period. Some manufacturers, in an attempt to reduce unit costs, continued to operate their equipment and then were forced to undercut their competitors' prices in order to move their goods off the market. Herein lies the explanation of the remarkable maintenance of the production level in the midst of a severe depression.[10] At the low point in 1931 the output of women's full-fashioned hose had declined only 8 percent from the predepression high point.

In addition, hosiery manufacturers attempted to solve the problem of declining prices and profits by reducing labor costs. Wages everywhere were cut drastically, although the decline in the North was far greater proportionately than in the South. Average hourly earnings in Philadelphia for all occupations combined dropped from 80 cents in 1929 to 45 cents in 1933, while in North Carolina the average wage declined from 38 to 32 cents per hour. Another device to reduce labor costs was to move plants into low-wage areas, often leaving former workers stranded.

Though some manufacturers continued full production in an attempt to spread overhead costs, others operated their plants only intermittently or part time during the depression years. Whole mills shut down completely for varying lengths of time, while most plants had some obsolescent machines whose operations were discontinued. Finally, of course, there were numerous permanent shut-downs as the number of bankruptcies mounted with the deepening of the depression. These factors in combination resulted in a considerable volume of unemployment among hosiery workers in the older producing centers in the early 1930's.

[10] At the same time, of course, with these lowered prices, the full-fashioned industry was tapping an entirely new market previously reserved to seamless hosiery. This was, however, an inadequate test of the extent of the market since many low-income families were reduced to a bare subsistence level.

With the adoption of the NRA code in July 1933 came a united attack on the problem of overcapacity. Prices stiffened somewhat and wages began to rise. The code's most direct effect on employment came through the provisions limiting hours of work to 40 per week, and permitting 2-shift operation of equipment. Undoubtedly the 40-hour week accompanied with 80-hour operation of certain equipment increased the volume of employment in the industry. From 1929 to 1935 there was a 24-percent increase in employment, from 68,000 to 84,000; between the same two dates there was only a 14-percent net expansion in output.

By 1935 the industry had resumed its expansion, although at a reduced rate compared to the spectacular growth of the earlier period. Between 1935 and 1939, production totals and the per capita consumption of full-fashioned hose by American women surpassed the most optimistic prognostication of the 1920's. Employment jumped from an average of 84,000 wage earners in 1935 to 97,000 in 1939. The new, low retail-price brackets had come to stay. Prices broken in the deflation, stiffened somewhat under the NRA, but never again approached the predepression high levels. From 1933 onward, the greater part of the sales volume has been in the 59-cent to 69-cent and 79-cent to 89-cent lines. The market for hose above $1 became relatively small in terms of total volume, although the profit margins on these items are generally believed to be much wider than on more moderately priced hose.

The upswing of consumer income which accompanied the increase in business activity after the depression also contributed largely to the revival of demand for full-fashioned stockings. It appears that the new price levels provided an increase in the volume of consumption in at least two ways. In contrast to the predepression days, full-fashioned stockings were now so priced as to tap a market never before reached. Some former consumers of seamless hose could now afford to buy full-fashioned. The success of the "invasion" of the seamless market is indicated by the substantial decline in women's seamless production from 20,100,000 dozen pairs in 1929 to 15,900,000 dozen pairs in 1939.[11]

In still another way the lowered prices led to increased consumption. Women who had previously used full-fashioned hose could afford to buy more stockings per year than formerly. Style pressure was all in this direction. Additional colors were introduced, plus pressure to vary hose with different costumes. The durability of very sheer stockings, now worn on all occasions and not restricted as formerly to evenings, was not great. This tendency is reflected in the per capita consumption figures. By 1935, the American women were

[11] This 1939 figure is an increase over 1937 when only 13,600,000 dozen pairs of women's seamless hose were produced.

wearing on the average nearly one more pair of stockings per year than they had in 1929. Since that time the increase in per capita consumption has continued.

Total production in 1935 exceeded that of 1934 by 19 percent and surpassed all previous annual-output figures. In the succeeding years the annual percentage increases were smaller, but in absolute figures the all-time high, variously reported between 44 and 48 million dozen pairs, came in 1939. Thus by 1939 total output was 50 percent higher than at the peak of the 1920's. In the earlier decade, however, there was a total expansion in output of 320 percent and the relative increases from year to year were of much greater magnitude than in the more recent period.

During the decade of the 1930's, job opportunities, particularly in the South, expanded considerably. In 1939 the volume of employment was 43 percent above the predepression high point. In the period of renewed expansion from 1935 to 1939, some 13,000 workers were added to the industry's pay rolls. This was only a 19-percent increase in employment, whereas production increased 36 percent in this period, indicating a substantial increase in productivity during this period.

As late as March 1929 only 7 percent of the industry's equipment was in the South; 3 years later the South had acquired 14 percent of the knitting machines.[12] The severe pressure to cut costs in a period of deflation explains the extent of this relocation accomplished in such a brief interval. Since it is estimated that in 1929 the average ratio of direct labor costs to value added by manufacture was 45 percent, the potential reduction of the wage bill was no doubt alluring to a manufacturer under pressure to obtain lower costs of production.[13] Accordingly manufacturers seeking desperately to adjust to falling prices and rapidly disappearing profit margins were attracted by the low wage rates in areas outside the highly unionized, long-established centers of the industry. Some moved their mills into the small towns of Pennsylvania, New Jersey, Delaware, and Maryland, while others turned southward.

A study made by the Bureau of Labor Statistics in 1938 revealed that southern wages continued to increase consistently, whereas northern average earnings decreased in some areas and increased in others. State labor legislation, together with the Federal Fair Labor Standards Act, have also contributed to the reduction in the wage differential between North and South. For example, the difference between average hourly earnings in the Philadelphia area and in North Carolina amounted to only 9.7 cents in 1938; as against 41.7 cents in 1929. Nevertheless, the shift to the South has continued.

[12] Dr. George W. Taylor's equipment inventory of March 1932, obtain from an unpublished manuscript of the Textile Research Department of the University of Pennsylvania.

[13] From data presented at the NRA code hearings by the National Association of Hosiery Manufacturers.

The fact that the average ratio of wages to value added has increased from 45 percent in 1929 to 64 percent in 1939 partially explains the motivation. Undoubtedly, the shift to the South is also motivated now by the comparative lack of unionization and collective bargaining there.

That the industry continued to move to the South after the great depression is clearly indicated by a few figures. By 1935 the South had acquired nearly one-fifth of the total equipment and plants; it employed slightly more than 20 percent of the workers; and produced 23 percent of all full-fashioned hosiery (table 2). By 1940 at least one-third of the knitting machines and plants were in the South; over one-third of the workers were employed there; and they produced two-fifths of the industry's output.

TABLE 2.—*Geographical Distribution of Full-Fashioned Hosiery Workers, 1929–39* [1]

Producing area	Number of wage earners			Percentage distribution, by area			Indexes (1929=100.0)	
	1929	1935	1939	1929	1935	1939	1935	1939
Total industry	68,029	84,418	97,200	100.0	100.0	100.0	124.1	142.9
North	61,427	65,700	62,779	90.3	77.8	64.6	107.0	102.2
Pennsylvania	37,556	42,522	35,253	55.2	50.4	36.3	113.2	93.9
New Jersey, Maryland, and Delaware	5,441	5,703	7,611	8.0	6.7	7.8	104.8	139.9
New York and New England	5,055	3,733	6,453	7.4	4.4	6.6	73.6	127.7
West and Middle West	13,375	13,742	13,462	19.7	16.3	13.9	102.7	100.7
South	6,602	18,718	34,421	9.7	22.2	35.4	283.5	521.4
North Carolina	4,048	11,662	20,347	5.9	13.9	20.9	288.1	502.6
Tennessee	1,801	4,054	4,762	2.6	4.8	4.9	255.1	264.4
Virginia	240	[2]	2,866	.4	[2]	2.9		
Georgia	[3]	447	2,008	[3]	.5	2.1	398.7	2,366.5
Other South	513	2,555	4,438	.8	3.0	4.6		

[1] Data are from Census of Manufactures. Prior to 1935 dyeing and finishing of hosiery knit by other firms (separate ownership) were included in the Dyeing and Finishing Industries. Beginning in 1935 these firms were included in the Hosiery Industry.
[2] To avoid identity disclosure, 2 plants in Virginia had to be included in Other South.
[3] To avoid identity disclosure, 1 plant in Georgia had to be included in Other South.

Recent Technological Changes and Reduced Labor Requirements

Although until recently there was no change in the basic design of the equipment used in the knitting of hosiery, there have been in in the last two decades definite trends toward higher gauges, more sections per machine, and greater speed.

The gauge of the "Reading" machines produced in different periods illustrates the shift to higher-gauge equipment.[14] In 1920, over three-fourths of the Reading machines produced were 39 gauge, but by 1926, 42 gauge was the most popular type, accounting for 73.6 percent of the year's production. From 1936 to 1939 most of the Reading machines made were 45 gauge, but in the latter year 30 percent were

[14] "Reading" is the trade name of the equipment built by the Textile Machine Works Co. of Reading, which has been for years the leading domestic producer of full-fashioned knitting machinery.

51 gauge or over. The trend toward higher gauges was accelerated in 1940, when 52.4 percent of the new Reading machines were 51 gauge or over. This shift to higher-gauge machines would tend to cut down individual productivity, because higher-gauge stockings require more "courses" (or horizontal rows of loops) to a leg. The tendency, however, was more than offset by increased speed and by machines with more sections.

The Textile Machine Works Co. reports that the machines it built between 1922 and 1933 could knit 60 courses per minute. The maximum speed of its 1939 models was 82 courses per minute.

The trend toward more sections per machine has been significant in reducing costs by increasing the productivity of the knitter. As late as 1929 nearly half of the legging machines in place had 18 sections or less, 35 percent had 20 sections, and only 17 percent had 24 sections.[15] By 1935, 18-section legging machines constituted less than one-third of the total, and today such machines are fast disappearing from the industry. After 1935 the trend to more sections per machine continued, new installations being mostly 26-section and 28-section machines. The most recently installed legging machines usually have 30 and 32 sections, but the typical legger in place today has 24 sections.

Unfortunately there are no complete figures on the number of new machines installed since 1935. It is known that they constitute a relatively small proportion of the 16,200 machines estimated to be in place in the industry in 1940. Probably the great majority of the machines in use today were originally built during the period of rapid expansion of the industry in the 1920's. In the past, the average life of knitting equipment has been considered to be somewhere between 10 and 15 years. Because there was no basic change in the design of the equipment, periodic overhauling and rebuilding was a reasonably successful solution to the problem of obsolescence of old machines. The large capital outlays required for the purchase of new equipment made complete modernization prohibitively expensive for many firms in a period of small profit margins.[16] Accordingly, it was common practice to extend short-section equipment into longer machines of 26, 28, and even 30 sections.[17] The increased productivity of such rebuilt machines at least temporarily kept them from the scrap heap, but they are at a distinct competitive disadvantage compared with the newer conventional equipment.

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[15] Dr. George W. Taylor's inventories of March 1, 1929, and April 15, 1935, obtained from an unpublished manuscript of the Textile Research Department of the University of Pennsylvania.

[16] The modern single-unit machines sell for $16,000 to $18,000. The 10-year-old conventional legging machine originally cost about $12,000, and the footing machine $4,000.

[17] The trend toward increased sections per machine has probably reached its peak with occasional 40-section machines. There are practical physical limits to the size of full-fashioned knitting machines. Also machine "down time" becomes more costly the more sections per machine. (See footnote 28, p. 835).

PROBLEM OF OBSOLETE MACHINERY, PAST AND PRESENT

Thus far the obsolescence of knitting machinery has been indicated in terms of higher gauges, more sections, and greater speed of the new machines or rebuilt machines. Although there are no figures on the gauges of machines in operation, the periodic analysis of production, by gauge, presented in table 3 gives an indication of the same thing in terms of the end results. Very sheer, finely knit (high-gauge) hose have become increasingly popular with American women.[18] During the past 5 years, with the exception of service-weight stockings, profitable styles have called for construction of 45-gauge or higher. The final blow came with the introduction of nylon hose, knit on no machine below 45 gauge. Thus, from the spring of 1940 until the silk shortage in August 1941, the obsolescence of 39-gauge and 42-gauge equipment was intensified.

TABLE 3.—*Trends in the Gauge of Silk Hose Produced, 1937–41* [1]

Gauge of machine	Percentage distribution of sample [2]					
	March 1941	October 1940	March 1940	March 1939	March 1938	April 1937
39-gauge or less	4.1	5.2	7.5	7.3	6.7	11.3
42-gauge	40.0	44.4	44.5	45.4	53.3	53.5
45-gauge	51.4	46.1	41.0	41.7	34.5	29.5
48-gauge	1.4	1.0	1.4	2.8	2.9	3.9
51-gauge, and over	3.1	3.3	5.6	2.8	2.6	1.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

[1] Data are from National Association of Hosiery Manufacturers, Quarterly Statistical Bulletin, February 1941 and May 1941.
[2] The sample analyzed by the National Association of Hosiery Manufacturers is estimated to be between 70 and 80 percent of the specified month's total production.

The decline in the production of lower-gauge hosiery is shown in table 3. In the brief space of 4 years (1937–41), 39-gauge hose dropped from 11 percent to only 4 percent of the total output. Even as late as March 1940 such hose constituted 7½ percent of the total. There had been a gradual decline in 39-gauge constructions for many years before this.

The decline of the market for 42-gauge stockings is of more recent origin. In the 2 years between March 1938 and March 1940, 42-gauge stockings dropped from 53 to 44½ percent of the total output. In March 1941, when nylon hose had been on the market for less than a year, 42-gauge stockings constituted only two-fifths of the total production. In the same period (March 1938 to March 1941) 45-gauge

[18] A further indication of sheerness is the use of fewer threads necessary on the higher gauge machines. According to the National Association of Hosiery Manufacturers, Quarterly Statistical Bulletin, February 1941 and May 1941, between April 1937 and March 1941, 2- and 3-thread silk hose increased from 38 to 60 percent of total output. In the same period 4-thread stockings decreased from 44 to 26 percent of total production. Service-weight hose (5 to 9 or more threads) has varied only slightly from 15 percent in April 1937 to 13 percent in March 1941.

stockings moved upward from one-third to one-half of the total. At least until the present crisis, this tendency, with the increasing use of nylon, was a serious threat to all 42-gauge equipment except that used for service-weight stockings.[19] The use of rayon and cotton in the current silk shortage will save, temporarily at least, much of this threatened 42-gauge equipment.

This prediction, however, applies only to 42-gauge equipment with more than 24 sections. For some time it has been unprofitable to operate machines with only 18 or 20 sections, because of their low productivity. As late as the 1937 census, two-thirds of the 42-gauge legging machines in place in the industry had fewer than 24 sections. There are no up-to-date figures on this point, but in the last 3 years an extensive rehabilitation program has taken place, notably in union mills.[20] This was scheduled for completion by the summer of 1941. The forced substitution of rayon and cotton may even stimulate the rebuilding of whatever usable 18- and 20-section, 42-gauge equipment remains in the industry.

The fate of 39-gauge equipment in the light of the present crisis is less clear. Prior to the summer of 1941, practically all 39-gauge equipment except some used on service-weight construction had become unprofitable to operate. With no possibility of reselling these machines, the only alternative was to scrap them. The union reports that in 1940, 600 39-gauge machines were junked out of a total in place, variously estimated to be between 1,500 and 1,700.[21] Many believed that by the end of 1941 most of these machines would have disappeared. Now it may be that manufacturers will save some of them in the hope that by working on rayon and cotton their usefulness can be extended for a short while longer.

It is significant that a relatively small proportion of 39-gauge equipment is in the South, while a high percentage of it is to be found in Delaware, Maryland, southern New Jersey, and in Pennsylvania, notably in the areas outside Philadelphia and Reading.[22] Thus, although there has been a considerable amount of junking in both the North and the South, in the end the South will be left with a higher proportion of machinery which can be operated profitably.

Although it had been evident for years that 39-gauge equipment was on the decline, the failure actually to junk it gave rise to one of the industry's most troublesome problems. As the lower-gauge machines were written off the books of firms in a position to modernize their

[19] With nylon at a premium, some manufacturers forced retailers to take a certain amount of 42-gauge silk hose by threatening to cut their supply of nylon hose. Firms with too small allotments of nylon (or none at all) were at a complete competitive disadvantage in the market.

[20] An article in a later issue of the Monthly Labor Review will describe the rehabilitation program of the American Federation of Hosiery Workers.

[21] The Textile Machine Works Co. reports the scrapping of 480 machines in 1940. In a survey of 15,144 machines it reports 1,782 39-gauge machines, or nearly 12 percent. Other unpublished sources show a smaller proportion of 39-gauge leggers in place.

[22] See geographical distribution published by the Textile Machine Works Co. in 1941.

plants, they were sold frequently to small knitters. A great many of these so-called "family" shops were set up in Maryland, Delaware, southern New Jersey, and outlying communities of Pennsylvania. Without sufficient capital and equipped with already obsolete machinery, these firms were very unstable. Bankruptcy, frequent change of ownership, and finally permanent shut-down have always been frequent among these submarginal units.

The constructions possible on this old equipment could not compete with stylized lines. The only advantage of these family shops was their ability to sustain price reductions. The unavoidable result of the ensuing price cutting was to push down the price on less expensive constructions, called "low-end goods," until there was no profit on them at all. Union mills, for instance, could not even cover costs on these machines. As a result the more efficient manufacturers, who had retained a few 39-gauge machines, for the most part ceased operating them. Prior to the present crisis, it was generally believed that with the increasing use of nylon, mills so poorly equipped and inadequately financed would rapidly disappear from the industry.[23] It is too early to say definitely that the present acute difficulties of the industry will hasten the elimination of these plants, but this would appear to be the most probable outcome.

POTENTIAL LABOR DISPLACEMENT RESULTING FROM RECENT EQUIPMENT CHANGES

For potential labor displacement in the full-fashioned hosiery industry it is necessary to examine recent inventions which involve basic changes in the design of knitting equipment. Until recently, technological progress in the industry has not kept pace with the advance in other textile industries; full-fashioned hosiery machines have remained essentially manually controlled machines, requiring close attention by highly skilled operatives. In the past several years, however, new machines and devices have been introduced, involving departures from the traditional full-fashioned processes and pointing toward an era of more nearly automatic operation. These changes in technique threaten to reduce substantially the labor requirements of the full-fashioned hosiery industry.

The most significant innovation involves the knitting of the complete stocking on one machine, thus eliminating from the process the functions of footers and toppers and effecting considerable savings in labor cost. These "single-unit" machines are now being used in a number of mills. However, they have not as yet been widely installed

[23] As yet there are no statistics to substantiate this statement, but it was commonly accepted in trade circles. The weight of obsolete equipment appears to have been the deciding factor in a large proportion of the firms bankrupt or liquidated in 1940. In this year the Textile Machine Works Co. reports that 63 mills with a total of 1,220 machines were liquidated or pending liquidation.

because of the large capital outlay necessary and, more recently, because of the difficulty in obtaining the machines as a result of the defense program.[24]

For these reasons the introduction of the single-unit machines is less important for the immediate future than the current installation of "back rack" attachments, which make possible the knitting of the entire full-fashioned stocking on the conventional legging machine. These converted leggers serve the same purpose as the standard single-unit machines, displacing the footers and toppers. The installation and operation of the attachment is relatively simple. It enables the foot of the stocking to be knit on the legging machine by reversing the normal narrowing process so that the stocking may be widened at the heel after narrowing for the ankle. The stocking produced on these converted machines differs from the one knit on ordinary legging and footing or single-unit machines in that it has a round heel rather than the customary pocket, or French heel. The round heel is considered inferior because it gives a poorer fit, but in spite of this, no particular difficulty in merchandising these stockings has been reported. The round heel has an important manufacturing advantage in that it does not have to be looped. The elimination of this operation increases the productivity of the loopers by about 35 percent.

The great advantage of legger conversion over single-unit installation is the comparatively insignificant cost of the "back-rack" attachment. These attachments can be installed for less than $200, while the cost of a new type, semiautomatic single-unit machine ranges from $16,000 to $18,000. Conversion does not entail the discarding of expensive machinery but, instead, gives new life to existing equipment. Some of the single-unit machines do not knit the heel of the stocking, and it is therefore necessary to use an automatic heeling machine in conjunction with them. In contrast, the converted legging machine knits the entire stocking, no other knitting operation being needed.

The potential effect of the conversion program in displacing labor is best illustrated by describing the usual productive structure of the knitting department and showing the changes caused by conversion of legging machines. In the knitting system, using the conventiona legging machine with 24 or more sections and the footer machines, there are usually 1 footer and 3 toppers to every 3 leggers.[25] Thus, if 3 modern legging machines are converted, 1 footer and 3 toppers are displaced on each shift.[26] In addition, the elimination of heel looping means a reduction in the number of loopers necessary. The produc-

[24] The Textile Machine Works Co. has concentrated its production facilities on national defense work.

[25] This may be varied as follows: 1 footer, 1 helper, and 2 girl toppers to every 3 leggers.

[26] If instead of the illustration used, older legging machines of less than 24 sections are converted, the ratio is 1 footer and 2 toppers to every 4 leggers. Fewer toppers are required to handle the smaller number of bars. Thus the displacement would be 1 footer and 2 toppers per shift for every 4 legging machines converted.

tion of legger operators on converted machines is reduced by 15 percent, but this loss is largely compensated by the reduction of idle time. Since in many cases leggers have been working short hours, they can make up lost production by working full time. Thus no additional leggers will be required.

The pressure to reduce costs and widen profit margins, together with the small capital expenditure required, has stimulated the introduction of the back-rack attachments. During the first 7 months of 1941 the rate of conversion increased rapidly [27] and present indications point to the eventual conversion of a large proportion of existing legging machines after the temporary suspension of the program during the raw material shortage. It is probable however, that conversion will not be complete, because some merchandisers feel that the round heel will not find universal acceptance among consumers.

Several other technological developments in recent years have contributed toward the reduction in labor requirements. The automatic welt turner, hailed as a big step toward completely automatic full-fashioned machinery, increases the productivity of leggers by 20 to 25 percent. This device automatically forms the welt or hem of the stocking, eliminating the time-consuming manual adjustment and turning of the welt by the legger. Thus important economies are achieved by reducing the amount of "machine down time." [28] The automatic welt turner is used on some of the newest-model machines, and it can be installed on old machines. It is quite expensive, however, and requires volume production to make its installation profitable.

A new type of examining machine now in use doubles the production of finished-stocking examiners. Operators are now averaging 21 dozen pairs per hour, whereas 10 or 12 dozen was formerly considered top production. The resulting increase in productivity will probably displace many workers in this occupation.

There have been many other improvements in both the knitting machinery and finishing equipment that tend to increase individual productivity. Some involve changes in design, and others are minor refinements increasing the speed and efficiency of the machines. Perhaps the best measure of the improvements in knitting machinery is a comparison of the productivity of the newest-type machines with that of the older machines still in use.

The 1941 wage survey of 37 union mills, directed by the associate impartial chairman of the full-fashioned hosiery industry, provides useful data on the productivity of recent-model 26- and 28-section

[27] A survey of 39 mills made in the spring of 1941 by the American Federation of Hosiery Workers showed that 334 out of 1,770 leggers, or 18 percent, had been converted. Since the time of the survey, until August 1941, conversions were made at an increasing rate.

[28] This is the time lost while the machine is idle when adjustments are made and manual operations performed. (A discussion of time consumed in manual welt turning will appear in a forthcoming report.)

legging machines as compared to that of short-section legging equipment 10 to 15 years old.[29] For example, leggers operating old 42-gauge 18-section machines averaged 40 dozen pairs of stockings for a 40-hour week, while leggers on new 42-gauge 26-section machines averaged 83 dozen pairs per week. A similar situation was found on 45-gauge equipment, where leggers on 18-section machines averaged 33 dozen pairs a week, and those on new 28-section machines averaged 87 dozen pairs.

A knitter on the most modern high-speed, 32-section, single-unit or legging machine, equipped with automatic welt turner and other new devices, can produce up to 100 dozen pairs of stockings per week. The new machines cannot be considered as typical of those in operation today, but they are indicative of the present stage of machine development and point the course of future technological progress.

When the defense emergency has passed and the manufacture of new machinery can be resumed, an era of almost completely automatic machinery will be imminent. This is the only post-war development within the industry itself which can be foreseen with certainty today. The changed world and national economy in that indefinite period after the war will determine to a large extent the conditions to prevail within this single industry. When the new automatic equipment is installed on a wide scale, labor requirements per dozen pairs of hose will be greatly reduced. Then, unless the volume of output can be greatly expanded through retail price reductions which will tap new levels of demand, employment opportunities even in the very long-run will show a marked decline.

In the next 2 or 3 years, however, there will be a substantial reduction in labor requirements as a result of the conversion of conventional legging machines into single-unit types. Because at the same time the total output of full-fashioned hose will be restricted, the use of this labor-saving device will lead in all probability to an extensive reduction of job opportunities. In the spring of 1941 the American Federation of Hosiery Workers estimated that, even without full conversion, the jobs of 4,000 footers, 11,200 toppers, and 1,250 loopers would be eliminated.

As an immediate reaction in the midst of the confusion arising from the raw material shortage, mill owners have temporarily suspended their conversion programs. It is too early to anticipate when these will be resumed. There is reason to believe that, after the first shock and while machines remain idle, the current dislocation may actually stimulate manufacturers to install the back-rack attachments. An additional incentive is the fear of some plant managers that a labor shortage may exist at such future time as the supply of

[29] In this study production and earnings data were tabulated separately for new machines installed as part of the rehabilitation and modernization program undertaken by union hosiery mills as part of their contract with the American Federation of Hosiery Workers.

raw material will permit normal production. If the present dislocation is prolonged, their currently unemployed workers will have to shift to defense industries, thus reducing the available labor force of the future. Finally, of course, the present dislocation is very costly and every effort must be made to achieve lower operating costs.

Introduction of Nylon as a Raw Material

Nylon hosiery first made its appearance on hosiery counters in May 1940. Heralded in the national press, it immediately found favor with American women. They were curious about this wondrous combination of air, coal, and water. Since then the demand for nylon hose has been large and constant. In the last 8 months of 1940 altogether 2,750,000 dozen pairs of nylon hose were shipped. Each month nylon hosiery attained a higher percentage of total full-fashioned hosiery shipments until in June 1941 it reached 20 percent (table 4). In the first 6 months of 1941 shipments of nylon hosiery totaled 3,453,000 dozen pairs. In view of the recently changed contract provision permitting nylon to be mixed with other fibers in welt and foot, close to 5,600,000 dozen pairs of all-nylon and part-nylon hose are expected to be shipped in the last 6 months of 1941.

The present annual rate of nylon output is about 8 million pounds. At du Pont's Belle, W. Va., plant the basic component, urea, is manufactured and shipped in tank cars to Seaford, Del. There the urea is transformed into nylon fiber and monofilaments. The first of the two Seaford nylon plants started operations in December 1939, and reached full capacity in September 1940, producing at the yearly rate of 4 million pounds of yarn. The first unit of the second Seaford plant began to operate in November 1940, and the plant was scheduled to attain top capacity some time in the summer of 1941. Because the units of a plant come into production successively, the practice followed by du Pont is to increase nylon-yarn allotments to hosiery manufacturers periodically. Until recently the full-fashioned hosiery industry obtained about 90 percent of the total nylon output. The other major uses of nylon are for surgical sutures, tooth brush bristles, men's ties and socks, women's underwear, and the newly introduced nylon seamless hosiery.

Because nylon hose are more acceptable to consumers than either rayon or cotton, the full-fashioned hosiery industry is looking forward to the completion of du Pont's new nylon plant under construction at Martinsville, Va. This additional nylon production will relieve considerably the present acute raw-material shortage.

TABLE 4.—*Fiber Composition of Full-Fashioned Hosiery Shipped, 1940 and 1941*[1]

Month and year	Quantities (thousand of dozen pairs)			Percent of total			
	All-silk hose	Silk leg with cotton or rayon welt	All-nylon hose	All-silk hose	Silk leg with cotton or rayon welt	All-nylon hose	Other yarns and mixtures
1940	32,318.1	7,681.1	2,750.5	74.8	17.8	6.4	1.0
January-June	14,794.8	3,838.5	586.7	76.2	19.8	3.0	1.0
July	1,953.0	433.2	221.8	74.1	16.4	8.4	.6
August	2,912.7	611.4	288.4	75.5	15.8	7.5	1.2
September	2,939.7	599.8	339.8	75.0	15.3	8.7	1.0
October	3,538.0	758.7	399.8	74.6	16.0	8.4	1.0
November	3,415.8	802.4	455.7	72.5	17.0	9.7	.8
December	2,764.1	637.2	458.3	71.0	16.4	11.8	.8
1941: First half	13,758.7	3,879.9	3,453.0	64.8	18.3	16.2	.7
January	2,280.8	545.7	394.3	70.2	16.8	12.1	.9
February	2,112.9	588.3	468.2	66.1	18.4	14.6	.9
March	2,547.7	695.8	572.9	66.3	18.1	14.9	.7
April	2,622.2	773.1	657.4	64.3	19.0	16.1	.6
May	2,158.5	662.8	658.7	61.6	18.9	18.8	.7
June	2,063.6	614.2	701.5	60.6	18.0	20.6	.8
July	1,922.7	741.1	672.8	57.1	22.0	20.0	.9

[1] Data are from National Association of Hosiery Manufacturers' monthly statistical reports.

Prior to the silk crisis, the Martinsville plant was not scheduled for completion until the spring of 1942. When this plant, equipped exclusively with a new and more efficient type of spinneret, is producing at full capacity du Pont's annual output of nylon yarn will be approximately 20,000,000 pounds. Unless the new supply is needed for defense purposes, hosiery manufacturers expect to get approximately 16,700,000 pounds of nylon yarn annually.[30] Currently there is pressure upon the Government to grant to the Martinsville plant priorities for machinery so that production may begin at the turn of the year.

Predictions for 1942 are difficult at this time. Even without du Pont's new capacity, 11,200,000 dozen pairs of all- and part-nylon hosiery could be produced (double the estimate for the last half of 1941). When the Martinsville plant is producing at full capacity, this figure could be raised to an annual rate in the neighborhood of 25 to 30 million dozen pairs.

Possible Labor Displacement Resulting from Widespread Use of Nylon Hose

Prior to the present raw-material crisis in the full-fashioned hosiery industry the American Federation of Hosiery Workers made an important prediction. The union stated that the increased wear found in nylon hosiery as compared to silk would of necessity reduce the total consumption of full-fashioned stockings unless sales volume greatly expanded as a result of defense spending. The union warned

[30] Estimated on the basis of 83 to 84 percent of nylon yarn now alloted to the full-fashioned hosiery industry. On October 1st du Pont cut by another 10 percent shipments of nylon yarn to the hosiery industry in order to provide a backlog of raw material for its new plant at Martinsville, Va.

its members that as a result of the increased use of nylon there would be a loss of 8 million dozen pairs from the normal level of production by the end of 1943.[31] Such a reduction, should it actually occur, will be one of the basic factors to be considered in the longer-run outlook of job opportunities for full-fashioned hosiery workers. Since the man-hour requirements for the production of nylon hose are practically equivalent to those for silk, a reduction in total consumption will mean a proportionate reduction in man-hours of work available. Whether this in turn would result in an actual decline in the number of jobs available or merely an all-round reduction in the hours of work for all employees cannot be determined at this time.

Early in the spring of 1941 when the Bureau of Labor Statistics was canvassing the industry for opinions on the effect of the introduction of nylon, trade circles were reluctant to make predictions until further evidence was accumulated. It was generally agreed, however, that if nylon hose proved to wear twice as long as silk hose of the same construction, its widespread use would lead to a substantial reduction in the total amount of full-fashioned hosiery annually consumed.

It must be emphasized that as yet there has been no authoritative analysis of the relative wearing qualities of nylon and silk hosiery of similar construction. Women everywhere have been comparing notes on the added life of nylon stockings. Although individual experience varies considerably, the average consumer thinks she gets more wear from nylon hose. For the final answer we must await the results of the United States Bureau of Standards' practical wear tests.

Meanwhile, experts are agreed on certain points: Nylon hose snag somewhat more frequently than silk, but they are considerably more resistant to abrasion. Abrasion is an important factor at the heel and toe. Because of its higher tensile strength and elasticity, nylon yarn can endure a greater pull without breaking than can silk. For these reasons it is quite possible that in the actual tests nylon hose will wear twice as long as the prevailing type of very sheer, finely knit silk stocking.[32] It must be remembered, however, that the industry itself, when it believes this to be a serious threat, will seek to increase the volume of sales by the construction of more sheer nylon hose. This would be a continuation of the past trend toward more sheer and less durable hosiery.

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[31] American Federation of Hosiery Workers, Report of the Officers and Executive Board, Philadelphia, April 1941 (p. 7).

[32] Until the raw-material shortage, no nylon hosiery was made on machinery below 45 gauge and nearly a third of it was made on 51-gauge machines and over. Experts are agreed that, other things being equal, the higher the gauge the better the hose, not only because an all-round better construction is made on the more expensive machinery, but also because snag resistance tends to increase directly with the fineness of the knit. Therefore the fact that hosiery is knit on higher-gauge machines is a further reason for expecting nylon to make an excellent record for itself with respect to durability.

The Raw-Material Crisis

The dislocation of the full-fashioned hosiery industry, caused by the sudden silk shortage early in August 1941, brought unemployment to large numbers of workers. In addition to this immediate result, the current raw-material shortage may also influence long-run employment opportunities.

SILK SHORTAGE OF AUGUST 1941

On July 26, 1941, Japanese assets in this country were frozen; a week later the Office of Production Management ordered the cessation of all processing of raw silk for civilian purposes as of midnight August 2d. The sudden elimination of its chief raw material led to an abrupt maladjustment of the full-fashioned hosiery industry, which in 1940 used 78 percent of all raw silk consumed in America.

To understand clearly the effect of the Office of Production Management order, it should be noted that nearly two-thirds of all full-fashioned stockings shipped during the first half of 1941 were made entirely of silk except for foot reinforcements. Nearly one-fifth of the total output consisted of silk legs with cotton or rayon welts, with or without foot reinforcements. Nylon hose made up an additional 16.5 percent (table 4). Thus, less than 1 percent of full-fashioned stockings produced were made exclusively of fibers other than silk or nylon.[33]

Aside from small quantities of rayon and cotton production, the work immediately available in the industry as a whole after midnight on August 2d consisted of (1) the production of nylon hose, (2) production of silk hose from silk already "wetted down in preparation for throwing" or in some more advanced stage of the productive process, and (3) dyeing and finishing of gray goods. In June nylon hose accounted for 20 percent of the industry's total monthly output. This proportion will now be increased. It is estimated that the quantity of silk in process for the industry as a whole was sufficient to supply about a month's work. Finally, there were on hand at the end of July approximately 2 months' normal shipments of gray goods. As a result of the buying panic which ensued, it is reported that dyeing and finishing departments have been working overtime to turn out these remaining stocks of gray goods. It was expected in trade circles that the Friday after Labor Day would see most of the supplies of silk and gray goods exhausted.

Meanwhile the industry was faced with two very difficult problems: (1) It was under the immediate necessity of wide-scale experimentation to discover how best to handle the substitute fibers in all phases of the productive process. Each fiber has its own characteristics; new

[33] In this period, however, there was some commercial experimentation with an all-rayon full-fashioned stocking. For some time the Department of Agriculture has been developing detailed specifications for all-cotton stockings to be knit on full-fashioned machines.

specifications must be prepared for the new constructions and the machinery must be adapted to the new fiber. Even after the initial experimental period, the workers must learn to handle the new material when commercial production is begun. Thus, for a period of weeks, output per unit of time is cut down.

(2) Simultaneously it was necessary for the hosiery industry to secure adequate supplies of substitute fibers over and above the current nylon allotments. Even with the changed du Pont contract permitting the manufacture of part-nylon stockings, present quantities of nylon yarn could provide for only a quarter of the previous volume of full-fashioned hosiery production.[34] Du Pont's nylon capacity could not be expanded for several months at the very earliest. It was soon apparent that high-count cotton yarn in sufficient quantities could not be obtained for some time if at all.[35] For the immediate future, rayon was the only possible raw material. But to the end of August, even rayon was not reaching the full-fashioned hosiery plants in sufficient quantities to prevent plant shut-downs as the silk reserves were depleted.

The order issued on August 2d by the Office of Price Administration and Civilian Supply, setting aside 10 percent of rayon production in August and September for hosiery and other former industrial users of silk, sought to ensure a supply of substitute rayon yarn to these industries. The order stated in broad terms that 70 percent of of this reserve was to be of the types suitable for hosiery. For a 2-week trial period, starting August 8th, the administration of this order was left to individual companies, and thereafter remained on that basis until a new order became effective on October 1st. It was intended that orders and deliveries by rayon firms be handled through regular trade channels without Government regulation.

Many complications were bound to arise before rayon yarn actually moved into full-fashioned hosiery plants. Intelligent experimentation could not be carried on until the hosiery men knew what quantities of low-denier rayon yarns and high-count cotton yarns would be available to them.[36] For some time it was known only that the supply

[34] To coordinate the efforts of the plants in making the transition and to conserve available raw materials, the Office of Production Management suggested that only 50 percent of nylon supplies be used in making all-nylon hose and the other 50 percent be manufactured with rayon or cotton fibers in welt and sole.

[35] At the onset of the emergency, the United States representative of the Manchester Cotton Board was optimistic about the ability of English mills to supply the needs of the American hosiery industry. Since then, however, he has announced that delivery dates on 160s and 140s 2-ply cotton yarns cannot be given. Orders are simply filed as received and may not be filled for months. America does not produce enough long-staple cotton to fill a large demand for fine cotton hose. Furthermore, there is insufficient spinning equipment in the United States to meet such a demand. The "ceiling" prices on cotton may discourage any expansion at this time.

[36] "Denier is the unit of weight" used to express the size of silk, nylon, and rayon filaments. "Low denier" indicates that a rayon filament is lighter and finer than heavier filaments and thus more suitable for full-fashioned hosiery.

Reverse terminology applies in the case of cotton yarn where "count" is used to express the fineness of yarn. "Count" indicates the length of yarn required to make up a pound, so that high-count yarns are the lightest and finest. These are most suitable for use in full-fashioned hosiery.

of substitute yarns suitable for full-fashioned hosiery was extremely limited. For example, high-tenacity 50-denier rayon yarn was much preferred by full-fashioned hosiery manufacturers, but this is produced in very limited quantities, and most of the available supply is required for defense purposes. Thus its use for hosiery was out of the question.

Not until the second month of the silk shortage was specific information forthcoming. On August 30th, the National Association of Hosiery Manufacturers in a letter to its members recommended that constructions be planned on the basis of 100-denier rayon yarn for the leg and 150-denier yarn for the welt, since little yarn below 100 denier would be available.

Meanwhile, until the experimentation could be completed it was impossible for hosiery manufacturers to place orders of the type which would clearly indicate to rayon producers what deniers of yarn were required. Thus, in planning their production, rayon producers were left with no reliable basis for estimating requirements for hosiery. Although all rayon deniers are made on the same spinnerets and require the same time per length of rayon yarn, the finer deniers are lighter and thus result in less total poundage. To provide properly for the full-fashioned hosiery needs rayon producers would have to transfer a part of their equipment from the production of higher-denier to lower-denier rayon. This would reduce their total production on a poundage basis, and would be expected to result in a price rise on the finer deniers.[37]

The order itself was misunderstood and the difficulties were thus further increased. Rayon producers included the rayon shipments already being made to seamless hosiery mills in the 7-percent reserve. It was not until August 29th that the order was clarified to provide specifically that the amount of rayon yarns to be set aside "must be over and above the amount producers had been selling to hosiery makers and other silk users before the allocation program started."

Finally, before any stable arrangements can be reached hosiery mills must ascertain consumer response to rayon hose. So far this has not been adequately tested.

When additional nylon yarn becomes available in 1942 it will alleviate the acute dislocation which has arisen from the raw-material shortage in the full-fashioned hosiery industry. With the Martinsville plant at full capacity, nylon hose alone would yield a monthly volume of production between 60 and 70 percent of the level attained in the first 6 months of 1941. This, together with relatively small quantities of rayon and cotton stockings to supply the low-price market, should restore operations to more nearly normal levels, but probably not to the peak levels of production reached in recent years.

[37] On September 3, the du Pont rayon section announced an upward price revision on the finer deniers. The American Viscose Corporation also raised its prices on oiled knitting cones September 9.

These lower production levels will be enforced by limited supplies of raw materials. That part of the industry receiving nylon allotments will make up its lost sales volume through higher prices and larger profit margins on nylon hose. These new conditions will mean a reduction in job opportunities in the full-fashioned hosiery industry.[38]

In addition to the immediate dislocation in the industry, the raw-material shortage has introduced several other factors: The wear to be obtained from nylon stockings, or any other hose for that matter, will be increased by the greater care that women will give their hose during the emergency. From the consumers' point of view the greater durability of nylon hose will be very beneficial in this period of scarcity. It is too early to say whether the new part-nylon hose will have the same durability as the all-nylon hose. An important consideration will be whether in the part-nylon constructions the toe and heel will be all nylon or merely nylon-reinforced.

Until the Martinsville nylon plant comes into production, the raw-material shortage will force a substantial curtailment of full-fashioned hosiery consumption. Had this shortage not occurred, the consumption of hose in 1941 would have been higher than in 1939 and 1940, as a result of increased consumer income. Table 5 indicates that shipments in the first half of 1941 were 9.2 percent above the first half of 1940. It is estimated that if the crisis had not occurred, approximately 24,700,000 dozen pairs of women's full-fashioned hose would have been shipped in the last half of 1941, raising the total for the year to 46,000,000 dozen pairs.

TABLE 5.—*Shipments of Women's Full-Fashioned Hosiery, 1935–41* [1]

Period	Million dozen pairs	Percent of change over previous year
1935	34.3	+9.1
1936	37.4	+6.1
1937	39.7	+5.7
1938	41.9	+5.5
First half	19.5	-----
Second half	22.4	-----
1939	43.1	+2.7
First half	20.4	-----
Second half	22.7	-----
1940	43.3	+.4
First half	19.5	-----
Second half	23.8	-----
1941: First half	21.3	-----

[1] Data are from National Association of Hosiery Manufacturers Quarterly Statistical Bulletin, February 1941 and August 1941. For differences of National Association and census data for 1939, see footnote 6, table 1.

[38] Reasons for the above prediction are discussed fully in a forthcoming Bureau of Labor Statistics report.

Employment Outlook

The first effects of the silk shortage varied among individual plants. Almost immediate lay-offs occurred in small, inadequately financed firms caught with little or no silk reserves in process. It was common practice among such companies to buy silk only when an order was received from a selling agent. In the scramble to buy substitute rayon and cotton yarns, such firms lack both the financial standing and the individual prestige to get deliveries. Even after this type of maladjustment has passed and nylon becomes more plentiful, the outlook for these manufacturers and their workers is very poor. Many of these plants are badly equipped with obsolete low-gauge, short-section machines. As a result it will be difficult for them to get nylon yarn. To stay in business without it will become increasingly difficult in the future.

Other manufacturers had varying quantities of silk reserves and therefore varying amounts of work available until such time as they could obtain deliveries of substitute fibers. Thus, although in the industry as a whole there remained, on August 2d, roughly a month's work on silk stocks, this was not true for all of the individual plants. Furthermore, some manufacturers with substantial silk reserves decided to curtail all operations until the situation clarified itself, or to hold silk for more profitable operations on higher-gauge machines.

Plants with large nylon allotments were most fortunate. So also were those firms which succeeded in obtaining high-count cotton yarn from the limited supplies available. Those companies which in recent months had been experimenting with all-rayon or part-rayon full-fashioned hose had two advantages: they had been through the technical experimentation, and had cleared the trade channels for obtaining rayon prior to the crisis. These firms were said to be practically the only manufacturers who in August obtained substitute rayon yarns in quantities sufficient for their needs.

UNEMPLOYMENT AND PART-TIME EMPLOYMENT, AUGUST 30, 1941

The net effect of the raw-material shortage in full-fashioned hosiery plants was a 12-percent decline in employment during the month of August, affecting 11,000 workers.[39] These figures, were derived from a sample of 155 full-fashioned hosiery plants that reported to the Bureau of Labor Statistics on their employment as of August 2 and August 30. Since man-hours were not reported, it was impossible to estimate the prevalence of part-time employment in these plants. It has been clearly established from other sources, however, that part-time employment was very extensive.[40] Table 6 shows the percentage change in employment for the major producing areas.

[39] September employment data show a further reduction of nearly 5,000 workers.

[40] Based on a 49-percent sample of the workers in the industry, the American Federation of Hosiery Workers estimated that 25.4 percent of the workers were working part time on August 29.

TABLE 6.—*Percent of Change in Employment, August 2–30, in Full-Fashioned Hosiery Industry, by States and More Important Production Areas*

State and production area	Number of establishments reporting	Percent of change in employment, August 2–30	State and production area	Number of establishment reporting	Percent of change in employment, August 2–30
All areas	155	−12.0	Northern States—Continued.		
Northern States	73	−11.1	Illinois	5	−9.7
Pennsylvania	30	−8.8	Other Northern States [2]	9	−19.8
Philadelphia area [1]	17	−7.6	Southern States	82	−12.9
Berks County	8	−10.8	North Carolina	48	−16.8
Other Pennsylvania	5	−8.7	Alamance, Guilford, and Randolph Counties	20	−8.8
New Jersey	14	−23.7	Mecklenburg and Gaston Counties	6	−8.5
Morris and Essex Counties	3	−21.8	Burke and Catawba Counties	9	−14.4
Burlington, Camden, and Gloucester Counties	6	−63.0	Other North Carolina	13	−28.1
Other New Jersey	5	+.9	Tennessee	16	−9.1
New York	4	−2.6	Virginia	3	−8.3
Massachusetts	3	+1.7	Georgia	7	−7.3
Wisconsin	3	−4.1	Other Southern States [3]	8	−4.4
Indiana	5	−22.0			

[1] Philadelphia area also includes Montgomery, Bucks, Chester, and Delaware Counties.
[2] Delaware, Maryland, California, Michigan, Minnesota, Iowa, and Missouri.
[3] Alabama, Kentucky, Mississippi, South Carolina, Texas, and Louisiana.

The reduction in employment was of about the same relative severity in both the North and South. Among individual States, however, wide differences in rates of employment decline are evident. New Jersey showed the largest proportionate reduction, 23.7 percent; while Massachusetts, one of the less important producing States, showed a slight increase in employment.

Among production areas within States, Burlington, Camden, and Gloucester Counties in New Jersey suffered a 63-percent reduction in employment.

The previous discussion showing the effect of the raw-material shortage on employment related only to the month of August, when there still remained silk reserves to be processed, and gray goods to be dyed and finished. Unless immediate deliveries of substitute fibers can be increased substantially, there will be further declines in employment in September. It is quite impossible to determine how long the present dislocation resulting from the raw-material shortage will last. The situation is too complex.

In the interim between the depletion of silk reserves, some time in September, and the opening of the new nylon-yarn plant at some as yet indefinite date in 1942, the only certain raw-material supply for the full-fashioned hosiery industry will be the present nylon-yarn allotments. If there is no further importation of raw silk to be used for civilian purposes, the remaining capacity of the industry must depend on available fine rayon and cotton yarns. As this report is written, the potential supply of these yarns continues to be uncertain, although the prospects of an improved flow of rayon during September are brighter.

Because, for an unknown period of months, processing of present nylon allotments will be the mainstay of the full-fashioned hosiery industry, some hosiery workers are assured steady employment. The remaining workers attached to the industry face a precarious future until the du Pont plant comes into operation. The extent to which these workers can avoid impending lay-offs and part-time employment depends on several factors: (*a*) The possibility of increasing the production of fine rayon and cotton yarns or of diverting them from other users in quantities sufficient to meet the needs of full-fashioned hosiery manufacturers; (*b*) the effective clearing of trade channels to establish the flow of available rayon and cotton yarns to the new customers; (*c*) the success of full-fashioned hosiery manufacturers in adapting their production to the use of these substitute fibers; and (*d*) the acceptance on the part of consumers of hose made of these substitute fibers.

Beyond the immediate prospect for reduced employment opportunities during the current raw-material shortage, there are longer-run factors that indicate an unfavorable employment outlook in the full-fashioned hosiery industry. The change from slower, less productive machinery to high-speed single-unit machines, equipped with the automatic welt turner and other new devices, will likely occur at a rapid rate when the defense emergency has passed and the manufacture of new machinery can be resumed. Such a development will result in a very marked reduction in total man-hours of employment, unless the market for full-fashioned hosiery shows a phenomenal growth.

These are longer-run developments, but in the next 2 years the installation of "back-rack" attachments previously described will effect a reduction in labor requirements. A decline in employment will be reinforced by the expected lower production levels resulting from the limited raw-material supplies. The net effect of these two factors will be a substantial reduction in the labor force by the end of 1943. If nylon hose proves as durable as predicted, it should satisfy the demand for chiffon stockings formerly supplied by larger quantities of sheer silk stockings. If consumption is stabilized at these new lower levels, the durability of nylon hose may be a deterrent to increased production when at some future date the available raw-material supplies are expanded.

Although the employment outlook in this industry for the Nation as a whole is unfavorable, the prospect in some areas is relatively favorable, while in others the outlook is decidedly more unfavorable than for the entire Nation.

If the past trend toward a geographical shifting in the location of the industry from the North to the South continues,[41] the prospects

[41] A detailed discussion of the migration of the industry to low-wage areas will appear in a forthcoming Bureau of Labor Statistics report.

are for little, if any, reduction in long-run employment opportunities in the southern producing areas as a group, or even for a moderate rate of increase. In the northern producing areas as a group, on the other hand, the prospects are for a severe reduction in employment opportunities that will necessitate the transfer of large numbers of workers to other industries.

TRANSFERABILITY OF FULL-FASHIONED HOSIERY WORKERS TO OTHER INDUSTRIES

Whether attention is focused on the short-run dislocation of workers or on the more permanent, long-run displacement, it is important to determine the extent to which full-fashioned hosiery workers may be absorbed into other industries.

Agencies and organizations concerned with the transfer of displaced hosiery workers have been making plans to facilitate such absorption and to explore the possibility of workers' transferring their skills to defense industries that need skilled labor. For the past year the American Federation of Hosiery Workers has been encouraging unemployed hosiery workers to take training courses for defense occupations and seek employment in defense industries. It is reported, that this program has met with considerable success. In the present critical situation the United States Bureau of Employment Security is analyzing the aptitudes and skills of hosiery workers to see how quickly and easily these workers can be shifted to defense and other industries. Through its employment offices the Bureau is actively engaged in registering displaced full-fashioned hosiery workers and placing them in new employment. The placement offices are studying detailed work histories of these workers in order to obtain a record of skills from previous experience that will permit immediate transfer to jobs in other industries and of characteristics fitting the workers for training in defense occupations.

It is difficult to make a precise statement concerning the ease and rapidity with which displaced hosiery workers can be absorbed in other industries. To do so would require, besides detailed job analyses, a survey of the alternative job opportunities in the immediate locality of the unemployed workers and a study of the mobility of these workers.[42] In this last connection, it must be remembered that over 50 percent of the full-fashioned hosiery workers are women and, since many of these women are married or are otherwise subsidiary wage earners, their mobility may be very limited.

The whole problem of available job opportunities to which displaced hosiery workers can shift is intensified in those areas where hosiery mills are situated in small towns or otherwise isolated from other sources of industrial employment. Some northern centers of

[42] A study of the mobility of hosiery workers is in process at the Industrial Research Department of the University of Pennsylvania.

hosiery production are known to be booming with defense activity, and in these localities retrained hosiery workers should be absorbed rapidly. However, in many towns, notably in the South, hosiery manufacture is the principal industry. In places where other industries are not expanding, there is small possibility of absorbing additional workers. In areas where such limitation of job opportunities is general, migration to more dynamic localities would seem to offer the only hope of immediate reemployment of displaced full-fashioned hosiery workers. It is reasonable to suppose that this need for migration is more likely to be found in the South and some of the smaller scattered towns in the North. For example, in a wage study in 1938 the Bureau of Labor Statistics found that 47 percent of the full-fashioned hosiery workers surveyed in the South were employed in communities under 25,000 population. When it is remembered that the 1939 Census of Manufactures showed that 36.4 percent of the full-fashioned hosiery workers were in the South, the seriousness of the situation in this region will be realized. However, in the South, extensive labor displacement may be limited to the unsettled short-run situation. If the full-fashioned hosiery industry continues its recent rate of migration to the South, it is possible that southern workers who otherwise would be forced to leave the industry can be absorbed by new companies or those emigrating from the northern producing areas.

In those localities where job opportunities are plentiful, workers experienced in the full-fashioned hosiery industry should be reemployed with relatively little difficulty. Most of the jobs in the industry require good eyesight and manual dexterity. Fragile and valuable material must be handled carefully throughout the process. Although in most cases hosiery workers will not be able to transfer the special techniques learned in making full-fashioned hosiery, they should be readily adaptable to jobs requiring similar related skills. Seamers, particularly, have always transferred without difficulty into branches of the apparel industry. Toppers should be able to do light but skilled assembly work in many of the defense industries. Since mechanical ability is requisite for knitters, they can be used in many skilled jobs where experience in adjusting and operating complicated machinery is valuable. In Milwaukee 70 hosiery knitters who had lost their jobs are being utilized by machinery manufacturers in the assembly of various intricate small parts.[43]

The less skilled hosiery workers will probably have to begin in unskilled jobs in other industries. However, this is usually the case when semiskilled workers shift from one industry to another. Semiskilled hosiery workers such as inspectors and pairers should be suitable for inspection and light assembly work in other industries.

[43] United States Bureau of Employment Security, Labor Market Developments, June 1941.

PRODUCTION, EMPLOYMENT, WAGES, AND PRICES IN DOUGLAS-FIR LUMBER INDUSTRY

MORE than a fourth of the lumber produced in the United States consists of the softwoods, mainly Douglas fir, of the west-coast regions of Washington and Oregon. This lumber (commonly described as "west-coast lumber" or "west-coast woods") and the main competing type of softwood lumber, namely, southern pine, together form more than half of all lumber produced in the United States. In 1939, 25.3 billion board feet of all kinds of lumber were produced. The softwoods accounted for 21.2 billion board feet; west-coast lumber, for 6.7 billion; and southern pine, for 7.7 billion.

Basic production data, together with detailed analyses of information on such additional subjects as employment, wages, profits, and prices, are presented in a recent cooperative study of the Douglas-fir lumber industry, made for the Bureau of Research and Statistics of the Advisory Commission to the Council of National Defense.[1] The study was designed as a contribution to the stabilization of wage and employment conditions in the Douglas-fir lumber industry by enlarging the range of factual information which both employers and employees accept as reliable. Both groups had been assured that such a study would be made as a sequel to the settlement of a strike on the basis of a temporary agreement to run for 3 months and to expire in March 1941.

The study has special interest for reasons other than its use as a factual basis for conducting wage negotiations and maintaining peaceful relations between employers and employees. It relates to an industry which, although retaining its basic importance in the national economy, has nevertheless been subject to exceptionally grave problems of comparative decline in demand for its products and in employment. Even the Douglas-fir region, comparatively recent in development and well favored by nature, has already experienced the effects of depletion and waste, diminishing returns, and stranded populations in cut-over areas.[2] The study has special interest also because of the methods used in dealing with Douglas fir as a segment of the lumber industry, which called for special tabulations and analyses of data not ordinarily segregated from general industry data. Still another noteworthy feature of the study is the fact that

[1] Advisory Commission to the Council of National Defense. Bureau of Research and Statistics. The Douglas-Fir Lumber Industry: An Interdepartmental Study Conducted under the Direction of Dr. Dexter M. Keezer. Washington, March 1941.

[2] The general characteristics of the lumber industry and the economic and social problems of depletion, stranded populations, etc., are described in a study by the Work Projects Administration, National Research Project Report No. M-5. Mechanization in the Lumber Industry: A Study of Technology in Relation to Resources and Employment Opportunity, by Alfred J. Van Tassel, with the assistance of David W. Bluestone (summarized in the Monthly Labor Review, July 1940).

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it was a cooperative undertaking on the part of several governmental agencies and of employers and workers directly affected.[3]

Output of Douglas-Fir and Other Lumber

The report here summarized was limited to the logging and lumber industry of the west-coast region of Washington and Oregon, west of the summit of the Cascade Range. In this region, Douglas fir constitutes about 61 percent of the total timber stand. Other commercial species are western hemlock, western red cedar, Port Orford cedar, Sitka spruce, Pacific silver fir, and noble fir. The region produces about 26 percent of the lumber, 23 percent of the wood pulp, and 90 percent of the shingles produced in the United States. The study deals mainly with Douglas fir, which accounted in 1939 for 74 percent of the total footage of logs cut in the west-coast region.

The market for west-coast lumber is widely distributed. Only 21 percent of the output of 1939 was consumed locally; 18 percent was shipped by water to Atlantic and Gulf ports; 32 percent was shipped by rail to regions east of the Rocky Mountains, mainly to the North Central and Northeastern States; 21 percent was shipped by water or rail to California; and 6 percent was exported. The heavy shipments of west-coast lumber to eastern areas indicates the competitive status of west-coast lumber in relation to southern pine.

The comparatively strong competitive position of the Douglas-fir region during the past decade and a half is indicated by the fact that the output of west-coast lumber has declined less than has the production of lumber as a whole, and less also than southern pine, the main competing type of lumber. Total production in 1925 was 41.0 billion board feet, and in 1940 only 27.0 billion board feet. Production of southern pine in 1925 was 13.2 billion board feet, and in 1940, 7.9 billion. In contrast, the amount of west-coast lumber produced in 1925 was 9.4 billion board feet and in 1940, 7.1 billion (table 1).

After 1900, production of lumber in the lake region began to decline and the west-coast region then became the leading lumber-producing area of the United States. The peak of production in that region, ranging around 10 billion board feet annually, was reached in the late twenties. The west-coast region increased its share of total lumber production from 23 percent in 1925 to 32 percent in 1931. The share then declined, but with the exception of 1938 remained more than a

[3] In addition to the Bureau of Research and Statistics of the Advisory Commission to the Council of National Defense, the agencies that contributed to the study included the Tariff Commission, the Bureau of Labor Statistics and the Wage and Hour Division of the Department of Labor, the U. S. Forest Service of Washington and the Pacific Northwest Forest and Range Experiment Station, the Bureau of Internal Revenue of the Treasury Department, the Bureau of the Census of the Department of Commerce, the Reconstruction Finance Corporation, the Interstate Commerce Commission, and the Maritime Commission. Also associated with the study were the West Coast Lumbermen's Association, the United Brotherhood of Carpenters and Joiners of the A. F. of L., and the International Woodworkers of America affiliated with the C. I. O.

fourth of the total. West-coast production in 1925 was only 41.6 percent of the combined west-coast and southern pine output and in later years usually ranged somewhat below 50 percent.

TABLE 1.—*United States Production of Lumber, 1925–40* [1]

Year	All kinds of lumber (billions of board feet)	Softwoods only (billions of board feet)				West-coast lumber as percent of—	
		All softwoods	West-coast lumber and southern pine combined	West-coast lumber [2]	Southern pine	All kinds	West-coast and southern pine combined
1925	41.0	33.3	22.6	9.4	13.2	22.9	41.6
1926	39.8	32.1	21.9	10.1	11.8	25.4	46.1
1927	37.3	30.0	20.6	9.7	10.9	26.0	47.1
1928	36.8	29.9	20.5	9.9	10.6	26.9	48.3
1929	36.9	29.8	21.6	10.0	11.6	27.1	46.3
1930	26.1	21.3	15.0	7.5	7.5	28.7	50.0
1931	16.5	13.9	9.7	5.3	4.4	32.1	54.6
1932	10.2	8.7	6.2	3.1	3.1	30.4	50.0
1933	14.0	11.9	8.6	4.2	4.4	30.0	48.8
1934	15.5	12.7	8.8	4.3	4.5	27.7	48.9
1935	19.2	16.0	10.9	4.9	6.0	25.5	45.0
1936	24.4	20.2	13.7	6.6	7.1	27.0	48.2
1937	26.0	21.6	14.5	6.8	7.7	26.2	46.9
1938	21.6	18.3	12.5	5.3	7.2	24.5	42.4
1939	25.3	21.2	14.4	6.7	7.7	26.5	46.5
1940	[3] 27.0	22.9	15.0	[4] 7.1	7.9	26.3	47.3

[1] Adapted from the Douglas Fir Lumber Industry, p. 2, table 1.
[2] Douglas fir, western hemlock, Sitka spruce, and western red cedar in west-coast region of Washington and Oregon. Source: Production of west-coast lumber for all years except 1940 from Pacific Northwest Forest Range Experiment Station; 1940 from West Coast Lumbermen's Association. Production of southern pine lumber from U. S. Bureau of the Census. Production of "all kinds of lumber" and of "softwood lumber" from National Lumber Manufacturer's Association.
[3] Preliminary.
[4] From West Coast Lumbermen's Association.

Washington formerly produced a much larger quantity of logs and lumber than Oregon, but Washington's share of log production fell from 67.5 percent in 1925 to 54.6 percent in 1939. The decline in Washington's share of sawed lumber was approximately the same. A larger proportion of the economically accessible timber stands have been cut in Washington than in Oregon.

Employment and Pay Rolls

There is no complete census of employment in the Douglas-fir industry as distinguished from the other branches of the lumber industry of Washington and Oregon. The Douglas-fir industry, however, is so predominant that the information collected by the Bureau of the Census for the lumber industry as a whole in these two States gives a rough measure of employment in the Douglas-fir industry in comparison with employment in the lumber industry of the country as a whole. Figures are available for Washington and Oregon and for the United

States for the census years 1927 to 1939, the figures extending back to the period of active building construction before the depression beginning in 1929. There was a much sharper decline in employment from 1927 to 1933 in the lumber industry of the United States as a whole than in Washington and Oregon, and between 1933 and 1939, employment was approximately as well maintained in Washington and Oregon as in the lumber industry as a whole (table 2).

TABLE 2.—*Number of Wage Earners in Lumber and Timber Products Industry in Washington and Oregon and United States, 1927–39* [1]

[Index numbers: Average 1935, 1937, and 1939=100.0]

Year	Washington and Oregon		United States	
	Number	Index	Number	Index
1927	86,067	115.6	413,946	144.5
1929	93,402	125.5	419,084	146.3
1931	49,026	65.8	196,647	68.6
1933	50,238	67.5	189,367	66.1
1935	63,473	85.3	255,230	89.1
1937	84,655	113.7	316,222	110.4
1939	75,232	101.0	287,934	100.5

[1] Data are from U. S. Census of Manufactures, lumber and timber products industry.

In the absence of a complete census or of a full-coverage survey of the Douglas-fir industry, employment and pay-roll figures for the industry must be obtained from reports covering a sample only, but these are significant as indicating the trends. Reports from a sufficient number of firms to warrant a representation of the trends are available for the period beginning in 1934 (table 3).

In the Douglas-fir industry, as in the lumber industry as a whole, the amount of employment fluctuates severely. This is attributable in large part to the ups and downs of building construction, but seasonal and other factors are also important. Between 1934 and 1940, there were two periods of relatively good employment for Douglas-fir workers, the first beginning in the late summer of 1935 and extending to the autumn of 1937, and the second beginning in the autumn of 1939. Employment in June 1941 was greater than in any June during the period from 1934 to 1940, with the exception of June 1937.[4] During the year 1940, the number of workers employed was 7.6 percent greater than the average number during the years 1935 to 1939. Fewer workers were employed, however, in 1940 than in 1936 or 1937.

There are considerable variations in the numbers employed in any one year, even though business activity may remain stable. Some indication of the irregularity of employment is given in table 4, show-

[4] The employment and pay-roll figures for January to June 1941 (table 2) are extensions made from Bureau of Labor Statistics records beyond the period covered by the study here summarized.

ing variations of employment from the monthly average. The percentages of table 4 are constructed from the index numbers of table 3.

TABLE 3.—*Indexes of Employment and Pay Rolls of Logging and Sawmill Establishments in Fir-Lumber Region of Washington and Oregon, January 1934 to June 1941*

[Average 1935–39=100.0]

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
	Employment												
1934	76.2	80.8	84.3	86.7	87.0	77.5	75.8	83.2	85.2	84.9	83.6	81.7	82.2
1935	77.4	83.3	87.6	91.1	71.7	37.6	70.3	94.0	101.6	103.2	101.3	101.0	85.0
1936	106.3	108.0	111.0	116.4	117.0	115.2	113.3	115.3	116.4	116.6	105.6	102.0	111.9
1937	101.1	98.0	114.5	118.2	120.9	122.5	122.5	121.8	119.8	110.1	96.7	79.5	110.5
1938	76.9	79.6	95.1	96.2	96.0	89.4	87.6	94.4	99.7	97.6	96.7	93.6	91.9
1939	88.3	85.8	95.4	100.8	101.4	99.7	100.4	104.0	103.8	109.4	110.9	108.6	100.7
1940	102.2	101.2	103.2	106.1	106.9	108.4	104.2	113.2	113.9	111.1	111.2	109.9	107.6
1941	109.0	111.3	114.8	118.2	113.9	115.6	------	------	------	------	------	------	------
	Pay rolls												
1934	50.1	62.1	67.2	70.6	65.9	57.6	50.1	60.3	65.2	65.9	62.3	62.9	61.7
1935	55.9	64.9	70.7	77.5	34.6	23.3	49.1	84.7	97.4	100.5	94.5	95.7	70.7
1936	103.2	99.6	110.5	118.8	122.8	119.4	110.8	117.5	119.1	122.7	100.0	96.2	111.7
1937	86.4	84.1	121.0	136.2	136.8	147.9	131.0	137.9	129.2	115.2	92.9	67.8	115.5
1938	70.7	74.2	96.9	96.5	94.5	90.9	75.7	103.1	108.4	111.4	102.2	96.1	93.4
1939	94.8	88.5	99.9	105.1	113.2	116.1	102.3	112.1	111.1	125.8	125.1	109.3	108.6
1940	110.7	111.3	111.8	120.5	124.4	122.6	107.3	131.8	133.6	130.4	124.8	119.5	120.7
1941	130.0	140.6	142.6	150.4	134.6	144.4	------	------	------	------	------	------	------

TABLE 4.—*Variations of Employment From Monthly Average in Douglas-Fir Lumber Industry in Washington and Oregon, 1934 to 1940*

Year	Average percentage variation from monthly average	Maximum percentage variation from monthly average
1934	3.9	+5.8 to −7.8
1935	16.6	+21.4 to −55.7
1936	4.0	+4.5 to −8.9
1937	10.1	+10.9 to −28.0
1938	6.2	+8.4 to −16.3
1939	5.6	+10.1 to −14.8
1940	3.4	+5.9 to −6.0

Employment in 1940 ranged from 6 percent above the average for the year to 6 percent below the average. This was the smallest variation in the entire period of the monthly statistics. In 1935 the number of workers employed in the month of greatest employment was 21 percent greater than the average number employed during the year, and the number during the month of least employment was 56 percent less than the average for the year. Employment was relatively stable during 1934, 1936, and 1940 and extremely unstable in 1935 and 1937. Part of the instability of employment is a result of the seasonal slack during the winter months. In each of the 5 years from 1934 to 1938, employment declined in November. In 1939 and

1940, the decline was deferred until December because seasonal influences were counteracted by the general increase in the demand for lumber in those years. The indexes of employment indicate that March is normally a month of decisive upturn from a period of slack employment.

The aggregate weekly pay rolls of the industry fluctuate even more widely than the number of workers employed. In good times the industry not only employs more workers, but it employs them for more hours per week and at better levels of earnings per hour. In periods of depression or of seasonal slackness, the hours of work and the earnings per hour tend to sag at the same time that employment is decreasing.

In 1934, Douglas-fir companies paid their workers in total wages only 62 percent of the average amount they paid during the years 1935 to 1939 (table 3). In contrast, in 1940 the total wages paid were 121 percent of the 1935–39 average. In June 1935, the month of lowest employment in the entire period of the monthly statistics, the number of workers was 38 percent of the average for 1935 to 1939, and the weekly pay roll was only 23 percent. In contrast, the peak employment in June 1937 was 123 percent of the 1935–39 average and the weekly pay roll was 148 percent.

Weekly Earnings

Weekly earnings of Douglas-fir workers in 1940 averaged $27.44. When average weekly earnings are viewed in the light of changes in the cost of living, the real value of the weekly pay check in 1940 was 26 percent greater than in 1927 and 11 percent greater than the average of the 5 years from 1935 to 1939. These estimates of weekly wages in terms of constant purchasing power are made by use of the cost-of-living indexes for Seattle and Portland, which afford the best available approximation of changes in the cost of living in the Douglas-fir region. Weekly earnings declined sharply between 1930 and 1932, and although the cost-of-living index also fell, the net result was a serious reduction of the weekly pay check in terms of purchasing power. After 1932, weekly earnings rose, and after 1933 the index of cost of living advanced; but the net result was a sharp upturn in real weekly earnings beginning in 1933 and continuing with minor recessions to 1941 (table 5).

Fluctuations of weekly earnings are shown in table 6, by months, from January 1934 to December 1940.

Weekly earnings are affected by the fluctuations in hours of work as well as by changes in hourly earnings. This is indicated by the normal decline in weekly earnings during the slack season with its short-time schedules. Thus, in 1940, weekly earnings declined after October because of the seasonal slack, with its accompanying reduction of weekly hours, even though wage rates were increased at this time.

TABLE 5.—*Average Weekly Earnings and Real Weekly Earnings in Sawmills and Logging Camps of the Douglas-Fir Region of Washington and Oregon, 1927 to 1940*

[Index numbers: Average 1935–39=100.0]

Year	Average weekly earnings		Index of cost of living in Portland and Seattle [2]	Average weekly earnings index adjusted by cost-of-living index
	Amount [1]	Index numbers		
1927	$25.77	106.0	119.9	88.4
1928	25.58	105.2	118.3	88.9
1929	25.31	104.1	118.5	87.8
1930	25.31	104.1	116.0	89.7
1931	21.04	86.5	105.6	81.9
1932	14.18	58.3	96.1	60.7
1933	15.50	63.7	91.4	69.7
1934	18.34	75.4	94.0	80.2
1935	20.35	83.7	96.3	86.9
1936	24.41	100.4	97.9	102.6
1937	25.58	105.2	102.6	102.5
1938	24.86	102.2	101.8	100.4
1939	26.38	108.5	101.2	107.2
1940	27.44	112.8	101.4	111.2

[1] Computed from data in monthly reports to the Bureau of Labor Statistics.
[2] Average cost-of-living indexes for Portland and Seattle.

TABLE 6.—*Average Weekly Earnings in Logging and Sawmills in Fir-Lumber Region of Washington and Oregon, January 1934 to December 1940*

Month	1934	1935	1936	1937	1938	1939	1940
	Average weekly earnings						
January	$16.08	$17.67	$23.77	$20.91	$22.47	$26.27	$26.50
February	18.79	19.07	22.57	20.98	22.79	25.22	26.89
March	19.48	19.74	24.34	25.85	24.92	25.63	26.50
April	19.93	20.80	24.97	28.20	24.55	25.51	27.77
May	18.51	11.80	25.68	27.67	24.10	27.31	28.47
June	18.17	15.11	25.35	29.52	24.87	28.49	27.67
July	16.17	17.08	23.92	26.17	21.15	24.91	25.20
August	17.71	22.05	24.91	27.69	26.70	26.38	28.47
September	18.73	23.45	25.02	26.38	26.60	26.19	28.69
October	18.98	23.81	25.74	25.60	27.92	28.14	28.72
November	18.24	22.82	23.14	23.50	25.87	27.60	27.45
December	18.82	23.16	23.08	20.85	25.11	24.63	26.60
Average	18.34	20.35	24.41	25.58	24.86	26.38	27.44
	Index numbers (average 1935–39=100.0)						
January	66.1	72.7	97.8	86.0	92.4	108.0	109.0
February	77.3	78.4	92.8	86.3	93.7	103.7	110.6
March	80.1	81.2	100.1	106.3	102.5	105.4	109.0
April	82.0	85.5	102.7	116.0	101.0	104.9	114.2
May	76.1	48.5	105.6	113.8	99.1	112.3	117.1
June	74.7	62.1	104.3	121.4	102.3	117.2	113.8
July	66.5	70.2	98.4	107.6	87.0	102.4	103.6
August	72.8	90.7	102.4	113.9	109.8	108.5	117.1
September	77.0	96.4	102.9	108.5	109.4	107.7	118.0
October	78.1	97.9	105.9	105.3	114.8	115.7	118.1
November	75.0	93.8	95.2	96.6	106.4	113.5	112.9
December	77.4	95.2	94.9	85.7	103.3	101.3	109.4
Average	75.4	83.7	100.4	105.2	102.2	108.5	112.8

There was a further rise in weekly earnings in 1941, although the rise was irregular.[5] The average in June 1941 was 10.5 percent higher

[5] Based on Bureau of Labor Statistics records beyond the period covered by the study here summarized.

than in June 1940. The increase in hourly earnings between June 1940 and June 1941 was larger than the increase in weekly earnings, but between December 1940 and June 1941 the increase in weekly earnings was greater than the increase in hourly earnings. The increase in earnings was counteracted in part by the rise in cost of living, a situation characteristic of wages and cost of living for the country as a whole. The rise from December 1940 to June 1941 in all of the 34 cities surveyed by the Bureau of Labor Statistics was 3.9 percent. The increase in Seattle was 5.1 percent, and in Portland, 4.3 percent. There had already been a comparatively large increase in these cities. In December 1940, the general index for the United States was only 0.7 percent above the average for the years 1935–39, in contrast to 1.8 percent for Portland and 2.0 percent for Seattle.

Average Hourly Earnings

Annual figures of the average hourly earnings of Douglas-fir workers and of workers in logging and sawmill establishments separately are available for the census years from 1929 to 1939. The earnings of workers in logging establishments are significantly larger than those of workers in sawmills. The average in logging establishments fell from 74.4 cents in 1929 to 50.7 cents in 1933 and rose by 1939 to 85.2 cents (table 7). The average in sawmills had a somewhat similar trend but in 1929 was only 56.3 cents as compared to 74.4 cents in logging establishments.

TABLE 7.—*Average Hourly Earnings in Logging, in Sawmills, and in the Two Combined, Douglas-Fir Region of Washington and Oregon, 1929–39* [1]

Year	Average hourly earnings (in cents)		
	Logging and sawmills	Logging	Sawmills
1929	63.5	74.4	56.1
1931	51.2	59.1	47.3
1933	43.1	50.7	39.3
1934	58.3		
1935	60.1	68.0	55.8
1936	66.3		
1937	74.6	[2] 84.4	[2] 69.2
1938	74.7		
1939	75.3	[2] 85.2	[2] 69.9
1940	77.6		

[1] Computed from Bureau of Labor Statistics data 1935–39 and from data collected from Douglas-fir firms by the National Research Project for 1929 to 1935.
[2] Estimated by assuming a constant differential in 1935, 1937, and 1939.

The average hourly earnings of Douglas-fir workers have regularly been higher in Washington than in Oregon. The average in 1934 for both States was 58.3 cents; for Washington, 59.5 cents; and for Oregon,

55.7 cents. The corresponding averages in 1940 were 77.6, 79.7, and 71.4 cents (table 8). There was an increase between December 1940 and June 1941, in the Douglas-fir industry as a whole, of 9.3 percent; in Washington, of 8.0 percent; and in Oregon, of 12.2 percent.[6] Thus, the difference between the hourly earnings in the two States was materially reduced.

TABLE 8.—*Average Hourly Earnings in Logging Camps and Sawmills of Douglas-Fir Area, Washington and Oregon, January 1934 to December 1940*

Year and month	Average hourly earnings (cents)			Year and month	Average hourly earnings (cents)		
	Total Douglas fir	Washington	Oregon		Total Douglas fir	Washington	Oregon
1934	58.3	59.5	55.7	*1937*			
1935	60.1	61.7	56.7				
1936	66.3	68.3	61.1	March	69.9	73.9	64.1
1937	74.6	76.7	69.2	April	75.8	78.3	69.4
1938	74.7	77.4	68.8	May	76.4	78.7	69.8
1939	75.3	78.2	68.8	June	75.9	78.2	70.0
1940	77.6	79.7	71.4	July	76.2	78.4	70.9
				August	76.4	78.6	71.1
1934				September	78.3	79.7	74.5
				October	76.7	78.6	71.3
January	56.0	56.9	53.7	November	77.3	79.3	71.6
February	58.5	60.0	54.6	December	76.5	78.5	71.1
March	58.3	59.9	54.1				
April	59.5	60.9	55.8	*1938*			
May	58.2	59.6	55.5				
June	58.4	60.0	56.0	January	75.3	77.1	71.1
July				February	74.9	77.4	69.9
August	57.6	58.7	55.2	March	73.7	75.4	69.9
September	57.9	59.0	55.2	April	75.8	78.3	69.9
October	57.7	58.6	55.6	May	75.7	78.2	70.1
November	58.0	59.0	55.6	June	74.7	77.4	69.0
December	58.4	59.4	56.0	July	73.3	75.5	68.7
				August	73.5	76.7	66.8
1935				September	73.7	76.8	67.2
				October	75.2	78.3	67.9
January	56.8	57.7	54.4	November	75.4	78.5	68.2
February	56.4	57.8	52.6	December	75.1	78.3	68.6
March	57.0	58.2	54.1				
April	56.8	58.0	53.7	*1939*			
May	57.7	59.6	56.0				
June	59.6	66.2	56.3	January	74.6	77.5	67.7
July	61.2	64.1	57.1	February	74.5	77.3	68.6
August	61.1	62.6	57.7	March	74.9	78.0	67.4
September	62.1	63.6	58.6	April	76.0	79.4	68.3
October	62.3	63.7	59.0	May	75.0	78.2	67.7
November	62.9	64.6	58.6	June	75.4	78.8	68.1
December	62.7	64.2	58.3	July	75.4	78.2	69.1
				August	74.4	77.1	68.5
1936				September	75.7	78.6	70.0
				October	75.5	78.3	69.8
January	63.0	64.3	59.2	November	76.2	78.9	69.6
February	63.5	65.2	58.9	December	75.8	78.4	70.0
March	63.5	65.1	59.4				
April	64.7	67.1	58.4	*1940*			
May	66.8	68.9	61.5				
June	67.6	69.5	62.1	January	76.4	78.7	70.0
July	67.3	69.2	62.6	February	76.5	79.3	69.1
August	67.1	69.4	61.4	March	76.9	79.1	70.5
September	67.8	69.8	62.5	April	76.7	79.4	70.1
October	67.8	70.2	62.1	May	76.6	79.4	70.1
November	69.0	71.6	62.3	June	77.3	79.0	70.9
December	68.3	70.3	63.1	July	74.8	76.9	70.1
				August	76.4	79.0	70.3
1937				September	77.5	79.9	71.7
				October	78.1	80.6	72.7
January	67.4	69.2	62.0	November	79.3	82.0	73.4
February	66.7	68.2	62.6	December	81.4	83.7	76.8

[6] Computed from Bureau of Labor Statistics records beyond the period covered by the study here summarized.

The average hourly earnings of Douglas-fir workers fluctuated in a narrow range around 58 cents from January 1934 to May 1935, then moved upward to about 67 cents until early in 1937. In March and April 1937 a sudden advance occurred, raising the average from 67 to 76 cents. There was no further important change until the autumn of 1940, when another upturn began.

Comparison of Hourly Earnings in Douglas-Fir and Other Industries

Comparisons of hourly earnings are subject to many qualifications, regional, industrial, and occupational. The types of skill required in the lumber industry are necessarily in considerable part distinctive, with resulting problems of the movement of workers between lumber and other industries. The peculiar hazards and comparative isolation of lumbering are important considerations. Comparisons are nevertheless of interest, especially of industries employing mostly men and requiring somewhat similar degrees of skill. A comparison of this nature (table 9) shows that in Washington Douglas-fir workers received less per hour during August to October 1940 than did the workers in 9 of the 15 industries (counting lumber as a whole). The 9 industries were newspapers; foundries; steel works; paper; stoves; cement; brass, bronze, and copper products; beverages; and malt liquors. The six industries with earnings lower than in Douglas fir were lumber as a whole, flour milling, furniture, millwork, meat packing, and paints. In Oregon, the average for Douglas-fir workers was lower than the average for workers in 12 of the 14 industries listed (table 9) for that State. Only the furniture and paint workers, among those listed, had lower averages than the Douglas-fir workers.

TABLE 9.—*Average Hourly Earnings in Selected Industries* [1] *in Washington and Oregon, August to October, 1940*

Industry	Washington	Oregon	Industry	Washington	Oregon
	Cents	*Cents*		*Cents*	*Cents*
Lumber and timber products	78.4	74.0	Furniture	65.7	65.7
Douglas-fir region only	79.8	71.6	Liquors, malt	104.4	99.5
Beverages (nonalcoholic)	95.2	86.0	Millwork	72.3	73.6
Blast furnaces, steel works, and rolling-mill products	104.9	76.0	Newspapers and periodicals	112.2	113.5
Brass, bronze, and copper products	85.0	81.9	Paints and varnishes	77.4	68.6
Cement	80.6	—	Paper and pulp	82.5	79.3
Flour	74.8	76.6	Slaughtering and meat packing	72.6	75.9
Foundry and machine-shop products	86.8	85.5	Stoves	81.3	79.1

[1] In general, industries in which the estimated coverage was less than 30 percent were excluded. Also excluded were industries in which there is a large proportion of female labor.

Entrance wage rates for common labor in nine industries of Washington for July 1940 (table 10) give some indication of comparative earnings in different industries. The average of 61.5 cents per hour for common labor in the entire lumber industry of Washington was

lower than the averages in the building construction, cement, foundries, and paper industries, but higher than in the brick, electric power, gas, and meat-packing industries, most of the latter group being comparatively small industries.

TABLE 10.—*Entrance Wage Rates of Male Common Laborers in Washington State, July 1940*

Industry	Number of establishments	Number of laborers at entrance rates	Average hourly entrance rate
Brick, tile, and terra cotta	5	66	$0.587
Building construction	37	372	.806
Cement	4	60	.703
Electric light and power	6	107	.561
Foundry and machine-shop products	15	111	.646
Lumber (sawmills) [1]	86	4,235	.615
Manufactured and natural gas	3	39	.505
Paper and pulp	20	1,141	.645
Slaughtering and meat packing	7	150	.576

[1] Including logging camps.

Hourly earnings of Douglas-fir workers are higher, and have been higher for years, than the earnings of other major groups of lumber workers. A detailed study of the lumber industry in the late summer and early fall of 1939 showed an average of 77.3 cents in the Douglas-fir region as compared to 68.9 cents in western pine, 63.7 cents in redwood, 46.4 cents in the Northeast, and 34.6 cents in the South.[7] In recent years, however, earnings have increased somewhat more rapidly in the lumber industry as a whole than in Douglas fir (table 11). In December 1940, the average in the entire industry was 18.2 percent higher than the 1935–39 average, and in June 1941, 28.4 percent higher. In the Douglas-fir industry, the corresponding figure for December 1940 was 16.0 percent, and for June 1941, 26.7 percent.

TABLE 11.—*Indexes of Average Hourly Earnings in Lumber Industry of United States and in Douglas-Fir Lumber Industry of Washington and Oregon, 1934 to 1940*

Year and month	Index numbers (Average 1935–39=100.0)	
	Lumber industry of United States	Douglas-fir lumber industry of Washington and Oregon
1934	90.7	83.0
1935	90.2	85.6
1936	92.8	94.4
1937	102.1	106.3
1938	104.0	106.4
1939	111.0	107.3
1940	116.8	110.5
1940: June	117.7	110.6
December	118.2	116.0

[7] See Monthly Labor Review, July 1941 (pp. 187-208): Hourly Earnings in the Lumber and Timber Products Industry. (Reprinted as Serial No. R. 1336.)

There were extreme differences in hourly earnings between different sections of the North as well as between the North and the South. Thus, the average in Maine in 1939 was 33.9 cents, and in Delaware and Maryland, 38.5 cents, in contrast to 80.5 cents in western Washington.[8]

Wages and Labor Productivity

A study of the amount of wages paid per thousand board feet in Pacific coast sawmills and southern sawmills indicates that in most of the years from 1926 to 1935 the amounts paid per unit were similar. In seven Pacific coast sawmills the average in 1926 was $4.67, and in 1935, $4.56; and in nine southern mills the corresponding averages were $4.77 and $4.61. Hourly earnings throughout the period were much higher in the Pacific coast mills than in the southern mills, earnings in the former being at times more than twice as high as in the latter.[9] The differences in hourly earnings were thus approximately counterbalanced by differences in the amount of labor employed per unit of output. It may be assumed that basic regional differences, such as those related to the timber stand and to accessibility, account for much of the difference in labor productivity. On the other hand, the availability of labor at comparatively low rates of pay makes possible the profitable employment of labor at a relatively low level of productivity and of business efficiency.

The importance of labor productivity in relation to wages and prices led to a study of productivity in the Douglas-fir industry. The results are described, however, as inconclusive. This was a result of lack of exactness in the basic data of units of output and of labor and wages expended on the several types of production in a particular segment of the industry such as Douglas fir.[10] In the lumber industry as a whole, which is surveyed biennially by the Bureau of the Census, it is possible to make somewhat more adequate estimates of the comparative trends of production, employment, and wages. Indexes of output per man-hour in the lumber and timber products industry of the United States, as constructed by the National Research Project of the Work Projects Administration, indicate considerable variability in output per man-hour but a general increase between 1925 and 1939 of 51.1 percent.

[8] See reference cited in footnote 7.

[9] Work Projects Administration. National Research Project, Report No. M-5: Mechanization in the Lumber Industry, p. 131.

[10] A company may engage wholly in logging; or partly in logging and partly in sawing and remanufacturing, with no fixed ratio of logs cut to logs sawed and with no constant proportion of types of remanufactures; or it may engage wholly in sawing and remanufacturing, with no fixed proportions of sawing, surfacing, and further fabrication. There is no precise information relating to changes in the grade and size of lumber produced or of the changes in the degree of finishing for the Douglas-fir industry as a whole or for any part of the industry that is recognizable as a representative sample.

The increase between 1935 and 1939 was 18.1 percent, and preliminary estimates for 1940 indicate a slight further rise.[11]

Wages and Prices

The survey of prices in the Douglas-fir lumber industry, made in connection with the study under review, included data on price trends, mill realizations, and price competition between Douglas fir and southern pine. In relation to labor there is special interest in the comparative trends of prices and wages.

Prices were more variable than hourly earnings. During upward movements of prices, hourly earnings tended to rise less than prices. During downward trends of prices, hourly earnings either remained constant or fell less than prices. When index numbers of prices and of average hourly earnings are put on the common base of the 1935–39 average, it appears that from the middle of 1935 to late 1937 hourly earnings were low relative to prices. Both prices and hourly earnings increased appreciably but irregularly. In early 1937 there was a sharp rise in both prices and hourly earnings. From the fall of 1937 to the fall of 1939, prices were low relative to hourly earnings. In the first half of 1940, hourly earnings remained high relative to prices but the situation after the middle of the year was reversed by a much more rapid advance in prices than in hourly earnings.

In December 1940 hourly earnings averaged 16.0 percent higher than the 1935–39 average, and wholesale prices, 29.5 percent higher. In 1941, hourly earnings continued to rise. Price changes varied with the type of product, but the increasing pressure of demand accompanying the defense effort resulted in rapid advances, especially in the prices of products and grades required for the defense program. In September 1941, the Office of Price Administration therefore ordered ceiling prices for Douglas-fir products corresponding to similar arrangements previously ordered for southern pine.

[11] A major problem of making exact computations of labor productivity in the industry as a whole is the effect on the basic data of changes in related industries, such as the planing-mill products industry. When there is a change in the amount of processing of lumber carried on in the lumber and timber products industry as compared to the amount of processing in related industries, such as planing mills, the change is reflected in the amounts of labor employed in the industries affected but not in the total number of units of lumber cut and sawed.

PRODUCTIVITY IN THE PORTLAND-CEMENT INDUSTRY [1]

Summary

OUTPUT per man-hour in the portland-cement industry increased by nearly 150 percent during the period 1919 to 1940. A relatively steady upward trend throughout the twenties was interrupted by minor fluctuations during the depressed thirties, but after 1938 the general upward movement was resumed.

This great increase in productivity took place without any major changes in basic manufacturing techniques. A number of minor technical improvements, however, were reported in many departments. The increase in productivity appears to have been occasioned primarily by the construction of new plants and the modernization of a considerable number of older ones. An increase in average plant capacity was also a factor, since unit labor requirements tend to be lower in large than in small plants.

Productivity within individual cement plants tends to vary directly with the rate of capacity utilization. For the industry as a whole, on the other hand, the relationship between capacity utilization and productivity level is not necessarily direct or fixed. At low production levels there is a tendency to shut down the less efficient units of the industry and concentrate production in the more efficient plants. This practice is facilitated by multiple-plant operation, which is common in the industry.

The available data tend to understate the actual improvement in man-hour productivity which has occurred in the cement industry, since they do not take into account the marked improvement in the quality of standard portland cement in the last two decades.

Production in this industry has shown enormous fluctuations. Between 1919 and 1928, the year of maximum production, the amount of portland cement manufactured more than doubled, increasing from 80,800,000 to 176,300,000 barrels. A sharp drop to 63,500,000 barrels in 1933 was followed by a relatively steady recovery through 1940, when 130,300,000 barrels were produced.

From 1919 through 1925 increasing production more than balanced advancing labor productivity in determining employment. The average number of wage earners employed by the industry rose during this period from 25,300 to 38,000. After 1928, employment was adversely affected by both declining production and increasing productivity. By 1933 only 15,700 wage earners remained in the industry. Expansion of production brought greater employment opportunities after 1933, and in recent years employment has averaged

[1] Prepared by Arthur W. Frazer and Lenore A. Epstein under the direction of Duane Evans, chief, Productivity and Technological Developments Division of the Bureau of Labor Statistics.

about 23,000 to 24,000 wage earners. In the near future, employment in the portland-cement industry will, as in the past, be determined primarily by activity in the construction industry.

Characteristics of the Industry

The cement industry includes the manufacture of hydraulic cements from rock which is usually quarried by the manufacturing establishment. In 1939, 23,800 wage earners were engaged in the production of 124,700,000 barrels of cement and some secondary products; the total value of the output was $192,600,000.[2]

Virtually all the cement produced in the United States during the past three decades has been of the portland type, although small quantities of natural, puzzolan, and masonry cements have also been manufactured. The following discussion is therefore restricted whenever possible to portland cement.[3]

Cement manufacture begins with the quarrying of rocks containing high proportions of calcium and silica. These materials are first reduced in giant crushers, and then pulverized in grinder mills. The different components are blended in suitable proportions either during or after grinding and the mixture is transported to kilns to be burned. During burning or calcining, the mass reaches a temperature of 2700° F. and partially fuses into small glassy clinkers. After these clinkers are cooled, they are ground into finished cement. Since the raw materials needed to manufacture cement are widely distributed geographically, cement plants are found in all parts of the United States.

In the dry process of cement manufacture, the unmoistened raw materials are blended together. The rival wet process, which was introduced during the twenties, now accounts for about half the output. In the latter method, the crushed raw materials are mixed with water before grinding. Thereafter, the mixture is partially dried and conveyed to the kiln. Subsequent treatment is the same in both dry and wet processes. The main advantage claimed for the wet process is more uniform blending of the mixture.

A "froth-flotation" technique to remove impurities has been developed in recent years as a refinement of the wet process. This technique makes it possible to use raw-material deposits which have so high a percentage of foreign matter that they could not be exploited economically by dry-process plants.

Industry Trends

Between 1919 and 1940 labor productivity in the portland-cement industry increased by nearly 150 percent. From 1919 through 1930,

[2] U. S. Census of Manufactures, 1939. Preliminary report.

[3] Since the number of wage earners in the portland-cement industry is not available separately, the employment figures are adjusted according to the ratio of portland to total cement production. It is assumed that the output per wage earner is the same for portland as for other cements. No serious error can result from this assumption, since portland cement constitutes about 98 percent of all cement produced.

the index of man-hour output, on the base of 1929=100, rose with considerable regularity from 60 to 104, or nearly 75 percent (table 1). In 1931 there was a sharp advance in productivity; the index in that year was about twice as high as in 1919. During the next 6 years, the index of labor productivity fluctuated at about the same level. Not until 1938 was there clear evidence of a resumption of the general upward trend. However, if the 1931 peak and the decline in 1935 are disregarded, the entire period might be characterized as one of slowly increasing productivity.[4]

TABLE 1.—*Indexes of Production, Employment, Man-Hours, Output, Pay Rolls, and Unit Labor Cost in Portland-Cement Industry, 1919–1940* [1]

[1929=100]

Year	Equivalent production [2]	Employment	Man-hours	Output per—		Pay-rolls	Unit labor cost
				Wage earner	Man-hour		
1919	48.1	77.0	80.0	62.5	60.1	68.4	142.2
1920	58.6	93.7	94.5	62.5	62.0	[3]	[3]
1921	58.0	79.2	81.2	73.2	71.4	71.0	122.4
1922	68.1	101.2	86.4	67.3	78.8	[3]	[3]
1923	81.0	105.6	104.7	76.7	77.4	102.2	126.2
1924	87.8	112.2	110.7	78.3	79.3	111.2	126.7
1925	94.4	115.4	109.9	81.8	85.9	110.6	117.2
1926	96.4	113.0	110.9	85.3	86.9	108.6	112.7
1927	100.7	109.0	111.5	92.4	90.3	108.8	108.0
1928	103.0	102.6	109.1	100.4	94.4	104.3	101.3
1929	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1930	94.9	94.0	91.1	101.0	104.2	90.0	94.8
1931	72.8	73.1	60.9	99.6	119.5	61.4	84.3
1932	45.1	51.0	38.8	88.4	116.3	32.4	71.8
1933	37.4	47.7	31.9	78.4	117.4	28.6	76.5
1934	45.7	61.7	38.1	74.1	119.9	41.7	91.2
1935	44.6	62.0	39.6	71.9	112.7	42.8	96.0
1936	66.3	68.7	51.8	96.5	128.1	54.3	81.9
1937	68.6	79.0	56.6	86.8	121.3	69.7	101.6
1938	61.7	70.3	48.5	87.8	127.3	60.9	98.7
1939	71.9	70.8	51.9	101.6	138.6	64.2	89.3
1940	[4] 76.8	[4] 73.2	51.3	[4] 104.9	[4] 149.7	68.1	88.7

[1] Indexes of production, employment, and output per wage earner and per man-hour for 1919–1937 were prepared by the Work Projects Administration, National Research Project, Report No. M-3. The four indexes have been extended through 1940 by the Bureau of Labor Statistics, using methods and sources similar to those of the National Research Project. Data from the U. S. Bureau of Mines on finished production, converted to equivalent production, have been used in preparing the production index for the years 1938–40. The employment and pay-roll indexes are the Bureau of Labor Statistics series for the cement industry, adjusted by factors representing ratios of portland cement production to the production of all cement and further adjusted for 1938–40 to the level indicated by the 1939 Census of Manufactures. The index of output per man-hour was obtained directly from Bureau of Mines data; the 1940 figure is an estimate. The index of man-hours is the quotient of the production index and the index of output per man-hour. The index of unit labor cost is the quotient of the index of pay rolls and the production index.

[2] "Equivalent production" has been used here rather than finished production because it more precisely reflects the volume of work performed during the year. Equivalent production is derived by combining weighted figures on clinker production, finished production, and mill shipments.

[3] Not available.

[4] Preliminary.

[4] Data on man-hour output are not available for years prior to 1919. However, in 1904, 14,600 wage earners were required to produce 26,500,000 barrels of portland cement, while in 1919, 25,300 wage earners produced 80,800,000 barrels (Work Projects Administration, National Research Project, Report No. M-3: Mechanization in the Cement Industry, by G. Perazich, S. T. Woal, and H. Schimmel, Philadelphia, 1939, p. 7). There was thus an increase of 76 percent in output per worker during the 15-year period. Although these figures do not take into account variations in the length of the workday and the number of days worked per year, they nevertheless do indicate strongly that even in this earlier period substantial increases in labor productivity were taking place.

Production of portland cement in the United States more than doubled between 1919 and 1928, when 156 establishments reported peak production of 176,300,000 barrels (table 2). Following the wartime slump, the industry grew very rapidly under the impetus of the building boom of the early twenties and with the general increase in the use of cement as a construction material. Between 1921 and 1929, 51 new factories were erected and many older plants replaced much of their equipment with larger and more efficient units.

Although productive capacity and output per man-hour both continued to increase between 1928 and 1931, the total output of portland cement dropped nearly 30 percent, to 125,400,000 barrels. The decline continued during the 2 succeeding years. From 1932 through 1935, portland-cement production remained below even the 1919 level, but between 1935 and 1936, it increased about 50 percent. Although there was a further rise in 1939 and again in 1940, production in these years remained below the level maintained from 1923 through 1930.

TABLE 2.—*Employment, Production, and Capacity in Portland-Cement Industry, 1919–40*

Year	Number of plants operating	Average number of wage earners [2]	Production of finished portland cement	Obtainable capacity [3]
1919	111	25,345	80,778,000	120,818,000
1920	117	30,851	100,023,000	124,440,000
1921	115	26,100	98,842,000	122,701,000
1922	118	33,331	114,790,000	124,273,000
1923	126	34,775	137,460,000	137,579,000
1924	132	36,964	149,358,000	148,835,000
1925	138	38,014	161,659,000	164,524,000
1926	140	37,210	164,530,000	183,005,000
1927	153	35,886	173,207,000	193,018,000
1928	156	33,790	176,299,000	207,147,000
1929	163	32,934	170,646,000	220,079,000
1930	163	30,956	161,197,000	229,537,000
1931	160	24,074	125,429,000	231,073,000
1932	160	16,799	76,741,000	230,612,000
1933	152	15,718	63,473,000	228,979,000
1934	150	20,316	77,748,000	223,303,000
1935	150	20,429	76,742,000	222,628,000
1936	149	22,632	112,650,000	217,178,000
1937	150	26,003	116,175,000	216,940,000
1938	151	23,168	105,357,000	217,342,000
1939	150	23,325	122,259,000	217,959,000
1940	152	24,095	[4] 130,292,000	218,969,000

[1] From Work Projects Administration, National Research Project, Report No. M–3 (p. 78). The Project's figures, covering the period 1919–38, have been extended through 1940 from the original sources, U. S. Bureau of Mines, U. S. Bureau of Census, and U. S. Bureau of Labor Statistics data.

[2] The number of wage earners in the portland-cement industry is not available separately. The figures shown here are estimates obtained by adjusting employment in the entire cement industry by ratios of portland-cement production to the production of all cement. Since data on the production of all cement are not yet available, the 1939 ratio (0.980) was used to adjust the 1940 employment figure.

[3] "Rated" capacity of the industry, based on the capacity of finish grinding mills, includes the capacity of a few idle plants which were in operation in previous years. Capacity in 1939, for example, includes 150 plants active and shipping and 9 plants which were inactive in 1939 but which had produced or shipped from stock on hand within the previous 7 years. In accordance with the N. R. P. definition, "obtainable" capacity here represents 85 percent of rated capacity. According to the Brookings Institution, kiln capacity alone would restrict operation to 90 percent of rated capacity while seasonality of demand and limited storage facilities would further restrict operation to about 83 percent of rated capacity.

[4] Preliminary.

From 1919 to 1925, the increases in amount of production more than offset gains in labor productivity in determining the volume of employment. In the latter year, a peak employment of about 38,000 wage earners was reported for the industry. Between 1925 and 1928, employment declined to 33,800, despite the attainment in 1928 of a peak in production which has not yet been surpassed. The near constancy of the man-hour index reflects the fact that an increase in the average annual working time per wage earner paralleled the improvement in man-hour productivity.

Between 1928 and 1933, the number of wage earners employed declined by more than 50 percent to 15,700. Employment in the latter year would have been even lower, had it not been for the general adoption of the 36-hour week and the 6-hour shift,[5] since production was more than 60 percent below the 1928 peak and man-hour output was about 25 percent higher. During succeeding years, both employment and output recovered. Since 1938, however, employment opportunities have not kept pace with advancing production; productivity has increased and average hours of work have remained at about 38 per week. In 1940, approximately 24,100 wage earners produced 130,300,000 barrels of portland cement.

TABLE 3.—*Hours and Earnings in the Cement Industry, 1932–40* [1]

Year	Average number of hours per week	Average hourly earnings (cents)	Average weekly earnings	Year	Average number of hours per week	Average hourly earnings (cents)	Average weekly earnings
1932	39.8	44.1	$18.44	1937	38.8	65.5	$25.35
1933	34.1	46.7	16.55	1938	37.1	68.7	25.47
1934	32.8	56.2	18.64	1939	38.2	69.9	26.67
1935	33.9	57.2	19.39	1940	38.4	71.0	27.26
1936	38.5	57.9	22.27				

[1] The source of these figures is the U. S. Bureau of Labor Statistics. The results obtained by multiplying average weekly hours by average hourly earnings do not necessarily produce the average weekly earnings shown, since the latter are based on reports from all cooperating establishments, whereas the former are computed from a slightly smaller sample of establishments reporting man-hours.

An index of hourly earnings, based on the pay-roll and man-hour indexes for 1919–32 and the regular Bureau of Labor Statistics hourly-earnings series for 1932–40, shows an advance from 85.5 to 134.4. In contrast, the unit-labor-cost index, reflecting the magnitude of the productivity increase, declined from 142.2 in 1919 to 88.7 in 1940. After rising sharply between 1919 and 1925, hourly earnings remained fairly level until 1931, despite steady reductions in labor cost. After 1932, the workers in the industry enjoyed steadily rising wage rates; average hourly earnings increased from 44.1 cents in 1932 to 71.0 cents in 1940, with the major advances occurring in 1934 and 1937 (table 3). Except for a very sharp dip in 1936, unit labor cost rose steadily during the period of relatively constant productivity and

[5] U. S. Bureau of Mines, Minerals Yearbook, 1935 (p. 891).

rising hourly earnings from 1932 to 1937; from 1937 to 1940, however, unit labor cost declined by 13 percent while hourly earnings increased by 8 percent. It is noteworthy that, although hourly earnings were 34 percent higher in 1940 than in 1929, unit labor cost was 11 percent lower.

Factors Affecting Productivity

In interpreting the productivity index shown in table 1, it should be noted that during the period studied the quality of standard portland cement was improved considerably and several special-purpose portland cements were developed.[6] Had the quality remained constant, an even greater increase in the index of man-hour output would have been recorded.

A barrel of standard portland cement now has much more cementing capacity and a greater range of applicability than the same amount of cement produced two decades ago. A test cylinder of standard cement representative of the period 1931–35, for example, was found to have a compressive strength, at the end of a 6-month hardening period, of 6,560 pounds per square inch, compared with 5,050 pounds for a test sample for 1921–25 and 4,430 pounds for a sample for 1916–20. At the end of 7 days, a test sample representative of the period 1931–35 had a compressive strength of 3,390 pounds as compared with a strength of 3,350 at the end of a 28-day hardening period for a sample representative of the 1921–25 period. The increase in effective construction capacity of cement is illustrated by the fact that between 1924 and 1937, 21 out of 25 State highway departments reduced the amount of cement required per cubic yard of concrete by amounts varying up to 0.3 barrels.

These improvements in the quality of the standard product tend to increase labor requirements per unit of finished cement because of the additional processing, particularly finish grinding, that is required. One plant superintendent interviewed in the course of the field survery conducted by the National Research Project in cooperation with the National Bureau of Economic Research estimated, for example, that an additional output per finish-mill hour of 33 percent would be possible if standard portland cement were made according to 1920 standards of fineness instead of the more rigorous specifications now followed.

In the production of special cements, which embody high-early-strength, quick-set, water-proof, color, low-heat, or other character-

[6] The growing importance of special cements is indicated by the fact that they comprised less than 2 percent of all portland-cement production in 1927–28 and approximately 8 percent in 1935–38. See Work Projects Administration, National Research Project, Report M-3, on which the following paragraphs dealing with cement quality and special cements are also based.

istics, unit labor requirements are relatively high in the burning and shipping as well as in the grinding departments.

It is interesting to observe that the increase between 1919 and 1940 of about 150 percent in man-hour output of portland cement occurred without any major technical change in the basic production processes. All the basic techniques for the manufacture of cement were well established by 1919; numerous minor technical refinements, however, contributed to significant reductions in labor and fuel costs. Even more important than the development of such refinements was the adoption of the most advanced techniques and the best available equipment by a growing proportion of the plants in the industry. The greatest increase in productivity occurred during the twenties, when a tremendous expansion of productive capacity resulted from the construction of new plants and the modernization of older ones.

Installation of large-capacity equipment was a significant factor in increasing productivity, since about the same amount of operating and maintenance labor is required for large as for small machine units.

Cement production is so organized that the advantages of increased capacity or more advanced techniques in one department cannot be fully realized unless similar changes are introduced in other departments. Nevertheless, during the past two decades, the reduction in labor requirements per unit of finished cement has varied widely from one department to another, as shown by the following figures based on two samples of cement plants.[7]

	Percent of reduction in labor requirements per unit of finished cement, 1919 to 1934
All departments	51.7
Quarrying	57.7
Processing	49.2
Raw grinding and crushing	54.4
Burning	19.3
Finish grinding	56.3
Fuel preparation	59.5
Power	52.0
Maintenance [1]	62.2
Mill overhead [2]	28.3
Shipping	49.6

[1] Includes yard, shop, and repair gang.

[2] Includes mill office, storeroom, laboratory, superintendents and foremen, watchmen, and miscellaneous labor.

[7] Work Projects Administration, National Research Project, Report M-3, p. 31. Data for 1919 are from H. E. Hilts: Shall the State Own and Operate its Own Portland Cement Plants? (in Public Roads, January 1921, p. 14); they are based on 51 plants representing 40.6 percent of total production. Data for 1934 are from Monthly Labor Review, March 1936; they are based on 102 plants representing 74.8 percent of total production. The two samples were assumed to be comparable by the National Research Project.

Between 1919 and 1934, labor requirements per unit of finished cement were reduced more sharply in maintenance and quarrying than in the four other major departments. Use of alloy steels for machine parts subjected to rapid abrasive wear and the development of more durable kiln lining materials contributed substantially to the increased productivity of maintenance labor. Likewise, the use (since 1929) of dust collectors, which reduce the accumulation of dust on bearings and gears, lessened the labor required for repair and servicing. Increasing labor productivity in the quarry resulted chiefly from the adoption of larger and more efficient electrical and gasoline shovels and locomotives.[8]

At the end of the period, relatively fewer workers were required for crushing and grinding than for other processing operations. This resulted from improvements in the design of the equipment, introduction of compartment mills which integrate two grinding units into one, and wider use (especially since 1925) of air separators which operate in closed circuit with fine-grinding equipment to classify material in the grinding mill and separate it according to fineness.

The burning department, on the other hand, made little contribution to the reduction of labor requirements between 1919 and 1934.[9] Considerable emphasis was placed on improvement in fuel efficiency, however. Two of the most significant developments were the increased use of oil and natural gas instead of coal and the integration of the drying and pulverizing coal-preparing machines into one unit, which is frequently operated by the kiln maintenance man. Labor requirements are reduced when oil or natural gas is substituted for coal, because the crushing, drying, and grinding operations required to prepare coal are eliminated. Auxiliary fuel-saving devices—such as clinker coolers and clinker-heat recuperators—also contributed to the reduction of the labor required in fuel preparation.

The labor required in the shipping department was reduced substantially between 1919 and 1934, when automatic bagging machines and other mechanical devices were introduced and bulk shipping became more common. When cement is shipped in bulk—pumped directly from the silos to railroad cars—only pump operators are required; bag fillers, truckers, and sack cleaners are not needed.

An important development in the cement industry during the last two decades has been the introduction of the wet process for preparation of the raw materials prior to calcination. In 1927, the first year for which such information is available, 34 percent of the total output

[8] The figures discussed here relate to plants which do their own quarrying. For the industry as a whole, unit labor requirements in the quarry appear to have been reduced more substantially than shown, as a result of increased use of purchased raw materials.

[9] This may reflect in part the fact that more burning time is required when cement is produced by the wet rather than the dry process. During the period under consideration, a growing proportion of total output came from plants using the wet process, as shown below.

of portland cement was produced by plants using the wet process, whereas, in each year since 1931, 48 percent or more of the total came from wet process plants.[10]

It is claimed that the wet process has an advantage over the dry process because it permits "finer mixing, more accurate chemical control, and a raw mix of more uniform composition." [11] There is no conclusive evidence, however, as to relative advantages in terms of productivity. Between 1924 and 1935, unit labor requirements decreased more rapidly in wet-process plants than in dry-process plants, according to the findings of a sample study (table 4). Moreover, according to other sample data for 1934, wet-process plants appear to have a net advantage in respect to productivity over dry-process plants with the same capacity.[12]

Since most of the wet-process plants are of more recent construction than the dry-process plants,[13] apparent differences in the relative productivity of the two processes may be attributed, at least in part, to the fact that new plants are more likely than old to have installed basic and auxiliary equipment embodying the latest technical refinements. Moreover, new equipment generally requires less maintenance labor than does older machinery.

TABLE 4.—*Average Number of Man-Hours Required to Produce 100 Barrels of Cement in Sample Wet- and Dry-Process Plants,*[1] *1924–35* [2]

Year	Wet-process plants		Dry-process plants	
	Number of plants in sample	Man-hours per 100 barrels	Number of plants in sample	Man-hours per 100 barrels
1924	17	65.0	44	66.8
1925	22	57.9	45	62.3
1926	29	56.4	49	60.1
1927	39	50.3	50	52.3
1928	46	46.0	54	48.2
1929	41	44.8	51	48.7
1930	36	41.9	53	49.8
1931	33	37.5	45	50.9
1932	26	38.6	41	49.9
1933	27	39.8	42	50.8
1934	22	41.7	34	50.1
1935	26	43.7	34	52.7

[1] Shipping department excluded.
[2] Data are from WPA, National Research Project, Report No. M-3, table B-8. In the computation of the man-hour ratios, output was measured as a weighted average of clinker burned and finished cement produced, i. e., equivalent production for production departments.

Increasing size of plant has also been a factor in improving labor productivity. During the twenties, the average annual rated ca-

[10] U. S. Bureau of Mines, Minerals Yearbook.
[11] WPA, National Research Project, Report M-3, p. 3.
[12] This conclusion is based on an analysis of unpublished data for 41 wet-process and 45 dry-process plants, collected by Bernard H. Topkis, U. S. Bureau of Labor Statistics.
[13] Of the 53 new plants constructed during the period 1921-35, 49 employed the wet process. Moreover, some of the older plants changed from the dry- to the wet-process technique. (WPA, National Research Project, Report M-3, p. 3.)

pacity per cement mill increased 32 percent, largely as a result of increases in the capacity of existing mills.[14] The growth in plant capacity resulted in part from the introduction of larger units. Large plants, moreover, appear to have managerial as well as technical advantages.

Unit labor requirements are about 60 percent higher in cement plants with a capacity under 1,000,000 barrels than in those with a capacity of 3,000,000 barrels and over, according to data for 88 plants sampled in 1934 and classified according to estimated capacity (table 5). Differences in unit labor requirements appear to be slight, however, among plants with a capacity ranging from 1,500,000 to 3,000,000 barrels. The direct relationship between capacity and productivity appears to hold true for both wet-process and dry-process plants separately.[15]

TABLE 5.—*Average Number of Man-Hours Required to Produce 100 Barrels of Cement in 88 Sample Mills, by Annual Plant Capacity, 1934* [1]

Capacity [2]	Number of plants	Average man-hours per 100 barrels			
		Total	Quarrying	Manufacturing [3]	Shipping
All plants	88	47.6	7.7	33.6	6.3
3,000,000 barrels and over	4	40.0	6.2	27.8	6.0
2,500,000 to 2,999,999 barrels	6	47.5	7.0	34.1	6.4
2,000,000 to 2,499,999 barrels	10	49.3	9.3	33.0	7.0
1,500,000 to 1,999,999 barrels	29	48.5	6.7	35.5	6.3
1,000,000 to 1,499,999 barrels	29	56.0	8.3	41.0	6.7
Under 1,000,000 barrels	10	64.5	13.2	43.7	7.6

[1] Data are from Monthly Labor Review, March 1936 (p. 575).
[2] Annual capacity was measured by multiplying by 4 the production for the 3 highest consecutive months. Capacity as derived in this manner is necessarily lower than capacity according to the engineering concept. The latter measure would be more relevant in a productivity study.
[3] Does not include administrative labor.

Labor productivity is also directly related to the rate of operation of the individual plant. Although large quantities of clinker may be stored during the winter and early spring months in anticipation of heavy demands for finished cement during the summer and fall, the production of a plant is in general geared to the output of the kilns. The rate of operation of a single kiln cannot be varied.[16] If a plant has more than one kiln, its rate of operation may be varied by the utilization of different numbers of kilns, not all of which need have the same capacity.

The figures below, which are based on a sample of establishments, illustrate the fact that productivity falls markedly as the rate of

[14] The plants constructed during the same period were smaller, on the average, than those already in existence. (WPA, National Research Project, Report M–3, pp. 28 and 109.)
[15] Based on an analysis of unpublished data for 41 wet-process and 45 dry-process plants, collected by Bernard H. Topkis, U. S. Bureau of Labor Statistics.
[16] Because of the difficulty and cost of refiring, a kiln is generally shut down for a considerable period of time if its operation at full capacity is not economical.

capacity utilization declines. At 80 percent of capacity, for example, the average man-hour requirement per barrel of cement made in the sample plants was 9 percent higher than the average at full capacity. At 40 percent of capacity, the average man-hour requirement was 40 percent greater than at full utilization; and, at the 20-percent operation level, the labor requirement was 81 percent greater.

Practicably obtainable capacity utilized:	*Man-hours required per unit of output* [1]
100.0 percent	100.0
80.0 percent	108.6
60.0 percent	120.8
40.0 percent	140.4
20.0 percent	181.4

[1] Data are from WPA, National Research Project, Report No. M–3, table 7.

Work in the quarry may be almost independent of the rate of operation in the plant. In the plant, however, percent of capacity utilized has an important bearing on productivity, since one worker frequently attends more than one unit of the same type, so that the inactivity of one unit does not necessarily reduce the amount of time he spends on the job. The amount of labor used in servicing and repairing equipment is also greatly increased per unit of output when a plant runs at less than full capacity, since repair work on idle plant machinery is a customary policy.[17] Total labor requirements for supervision, laboratory research and control, and other indirect labor do not vary appreciably with the rate of operation. A foreman, for example, is needed in the burning department whether six kilns or two are fired.

Information on the percent of capacity utilized for the portland-cement industry as a whole, from 1919 to 1940, provides a very rough indication of changes in the rate of operation of individual plants (table 6). However, the ratio of production to obtainable capacity reflects also the number of days of operation by establishments in the industry and changes in the number of new plants in operation and in the number of relatively inefficient plants that operate only when production is expanding. The influence on productivity of changes in capacity utilization for the industry as a whole is therefore very complex.

[17] This should not, of course, be interpreted to mean that plants maintain their equipment for operation when they are shut down.

TABLE 6.—*Actual and Estimated Labor Requirements at Full Capacity in Portland-Cement Industry, 1919–40* [1]

Year	Percent of practicably obtainable capacity utilized [2]	Man-hours per 100 barrels at—		Year	Percent of practicably obtainable capacity utilized [2]	Man-hours per 100 barrels at—	
		Actual rate of operation [3]	Full capacity (estimated)			Actual rate of operation [3]	Full capacity (estimated)
1919	67	98.5	84.9	1930	70	56.0	49.0
1920	80	93.8	86.4	1931	54	48.3	38.4
1921	81	81.6	75.5	1932	33	50.1	33.3
1922	92	74.7	72.4	1933	28	49.7	31.1
1923	100	75.5	75.5	1934	35	48.6	33.0
1924	100	73.6	73.6	1935	34	51.1	34.3
1925	98	67.4	66.9	1936	52	45.6	35.8
1926	90	67.0	64.4	1937	54	48.3	38.5
1927	90	63.9	61.5	1938	48	45.7	34.8
1928	85	61.4	57.8	1939	56	42.2	34.1
1929	78	58.2	53.1	1940	60	39.1	32.4

[1] Data are from WPA, National Research Project, Report No. M-3, p. 24. Data extended through 1940 by the Bureau of Labor Statistics, using analogous methods.
[2] See table 2 for production and capacity figures.
[3] Since this series relates to labor requirements for finished cement, the index of its reciprocals differs slightly from the productivity index based on equivalent cement production, which is shown in table 1 of this report.

The last column of table 6 is of particular interest in that it provides a measure of the state of technological development of the industry independent of the effect of the rate of capacity utilization obtaining in the different years between 1919 and 1940. The data indicate that gradual advances took place between 1919 and 1930 and that particularly great increases took place between 1930 and 1933. The National Research Project attributes the advances in the earlier period largely to improvements in equipment and in the latter period largely to the selective operation of more efficient plants:

> The construction of new plants was probably the most important factor tending to raise labor productivity in the period 1925–30, whereas the selective operation of the more efficient plants was the most important factor in the years immediately following. During periods of low production the selective operation of more efficient plants is particularly possible, as nearly half of the output of this industry is produced by a few large corporations. Each of these corporations owns a considerable number of plants of varying age and technical levels; in times of declining output they can shift production to more efficient plants within the same area. Their least efficient plants, on the other hand, can be shut down temporarily.[18]

Employment Outlook

Major improvements in cement-manufacturing equipment, producing important changes in labor productivity, are not likely to occur in the next few years. Employment changes will probably be associated primarily with changes in production levels.

In the immediate future, the volume of production will depend largely on the requirements of the defense program and the extent to

[18] WPA, National Research Project, Report M-3, p. 25.

which the allocation of priorities on other building materials may, on the one hand, result in the substitution of cement and, on the other, in curtailment of nondefense construction. It is anticipated that the reduction which may occur in the nondefense demand for cement will be more than counterbalanced by the expansion of defense requirements, especially if an extensive program of construction of strategic roads, power plants, and factories is undertaken. Thus far, production and employment in the cement industry have been higher in every month of 1941 than in the corresponding month of 1940.

In the more distant future, it is not unlikely that the experience of the decade following the first World War will be repeated. The curtailment of normal construction for civilian residential and industrial uses during the emergency period may be followed by a sharp revival of building activity, resulting in the expansion of production and employment in the portland-cement industry.

Defense Activities and Conditions

PROFESSIONAL-PERSONNEL REQUIREMENTS OF INDUSTRIAL-RESEARCH LABORATORIES

IN April 1941 the Bureau of Labor Statistics made a survey of the present and future professional-personnel requirements of industrial-research laboratories, for the Army-Navy Munitions Board. The information was obtained by the occupational consultants of the Bureau's Division of Occupational Outlook by means of questionnaires and interviews. The 55 industrial-research laboratories surveyed are all in the major industrial centers east of the Mississippi.[1]

The companies that operate the research laboratories surveyed include manufacturers of automotive equipment, chemicals, drugs, electrical goods, explosives, food products, machinery, metals, paint, petroleum, plastics, public utilities, rubber, textiles, and tobacco products.

In April 1941 the 55 laboratories surveyed employed 7,120 professional workers. By July 1942, it was estimated, over 1,000 additional professional workers would be required. The following tabulation shows the number of laboratories employing research workers in the various fields, the number employed as of April 1941, and the anticipated increase in employment by July 1942.

Of the professional workers employed in April by the research laboratories surveyed, 60 percent were engineers and 26 percent were chemists. The largest rates of increase in employment were predicted for chemical engineers (37 percent) and mechanical engineers (31 percent).

Each research laboratory surveyed was asked to indicate the professional fields in which difficulties in recruiting workers were anticipated because of an inadequate supply of trained and experienced technicians. The replies indicated that shortages in each of the professions listed were expected by July 1942. Several laboratories reported that they were already having trouble in filling vacancies.

[1] The geographical extent of the coverage of the study is evidenced by the location of the occupational consultants who furnished the information: Prof. Hugh Killough, Brown University; Prof. Arthur E. Suffern, New York University; Prof. Walter R. Peabody, Rutgers University; Prof. Victor S. Karabasz, Wharton School of Finance and Commerce, University of Pennsylvania; Prof. Tipton R. Snavely, University of Virginia; Prof. Frank T. deVyver, Duke University; Prof. Emory Q. Hawk, Birmingham-Southern College; Mr. John D. Beatty, Carnegie Institute of Technology; Dean W. H. Stead, Washington University (St. Louis); and Prof. Don D. Lescohier, University of Wisconsin.

Actual Professional Employment in Industrial-Research Laboratories, April 1941, and Estimated Employment, July 1942

Occupational group	Number of laboratories employing specified personnel	Employed, April 1941		Increase in personnel requirements by July 1942	
		Number	Percent of total	Number	Percent of increase
All laboratories covered	[1] 55	7,120	100	1,048	15
Chemists	45	1,857	26	312	17
Engineers	40	4,262	60	595	14
Chemical	22	578	8	214	37
Electrical	22	645	9	143	22
Mechanical	27	426	6	130	31
All others	25	2,613	37	108	4
Metallurgists	23	281	4	63	22
Physicists	23	282	4	36	13
Others	14	438	6	42	10

[1] The items in this column exceed the total given, for the reason that a given laboratory may employ professional people in several of the various categories shown.

Difficulties in obtaining trained and experienced professional workers were anticipated by one-third of the laboratories in the case of engineers, and one-fourth in the case of chemists and metallurgists. Almost as many expected to have trouble in recruiting for the remaining professions.

OPERATING SCHEDULES IN MACHINE-TOOL PLANTS, JUNE 1941

RECENT expansion of production in machine-tool plants has resulted from enlargement of plant facilities and increased utilization of second and third shifts rather than by increased overtime, according to a survey undertaken by the Bureau of Labor Statistics at the request of the Office of Production Management. Practically all reporting establishments were working on multiple-shift schedules, with widespread use of overtime. Six full days of operation during the week were customary among the plants included in the survey, Sunday quite generally being reserved for necessary maintenance work. The survey was restricted to the larger plants in the industry. The 85 plants included in the preliminary summary employed 70,300 wage earners in June, 74 percent of the estimated total for the industry.

From the middle of 1938 to the end of 1940 both employment and average hours worked in machine-tool plants showed an almost uninterrupted increase. Since the beginning of 1941, however, average hours worked in the industry have tended to level off at around 52 hours per week, indicating that a peak has been reached in average hours per worker. The availability of data covering operating schedules in March 1941, for 76 of the 85 plants, permits a comparison of employment by shift in March and in June in identical plants. Em-

ployment in these 76 plants increased by 6,200, or 10.1 percent, between March and June 1941. Proportionately greater increases in the number of workers occurred on the second and third shifts than on the main shift. Employment on the third shift increased by 26.2 percent, on the second by 15.1 percent, and on the day shift by 7.1 percent. As a result, the percentage of all the workers in these 76 plants employed outside the main shift increased from 29.2 in March to 31.2 in June. The amount of overtime worked per worker showed no change during the 3-month interval.

The distribution of all workers in the 85 plants, by shift, shows 68.6 percent working on the main shift, 24.6 percent on the second, and 6.8 percent on the third shift. Any analysis of the extent of utilization of plant facilities based on the ratio of employment on the various shifts must take into account the various factors governing operations in machine-tool plants. For instance, in many of the surveyed plants, all productive machines were running full time, with the same number of operators on each shift. In these plants, however, 60 percent or more of the total plant force was engaged on the main shift, the preponderance of workers on this shift resulting from the operations of assembly, maintenance, and supply units which, in most instances with one shift per day, keep pace with continuous operation of production departments.

In response to an inquiry as to what considerations prevented the expansion of capacity by operating second and third shifts with forces as large as the main shift, 61 plants stated that they had encountered shortages of skilled workers, 24 plants were held up by shortages of supervisory personnel, 20 plants reported difficulties in securing sufficient materials, parts, and supplies, 11 plants had inadequate equipment, and 6 plants stated that legal restrictions such as maximum-hour laws for women affected their operating schedules. Eight plants employing 20,200 wage earners stated that they were operating their shifts at the maximum with present facilities. In these 8 plants, 42 percent of the workers were employed on the added shifts.

Among the 55 plants operating on a 2-shift schedule, there was considerable variation among the individual plants in the percent of workers employed on the second shift. The maximum shift ratio being used in any of the plants was 65:35, that is, 65 workers on the first shift to 35 on the second. The percent of workers on the second shift in other plants ranged from the maximum of 35 percent to less than 10 percent in a few plants. The average shift ratio for all the 2-shift plants was 77:23. The majority of the 2-shift plants were operating in excess of 20 hours per day and 6 days per week. Virtually all the wage earners worked overtime during the week, averaging 14.4 hours.

In the 26 plants running 3 shifts per day, the percentage of workers on the added shifts ranged from 15 up to 55 percent. The average

for all the plants was 40 percent. In a number of these plants, key departments operated two long shifts while the rest of the plant ran three 8-hour shifts. Overtime in 3-shift plants averaged 10.5 hours per week for more than 90 percent of the workers.

Tables 1 to 3 show the distribution of all workers in the 85 plants according to shift worked and give a distribution of 2- and 3-shift plants according to the ratio of workers on the added shifts.

TABLE 1.—*Employment in the Machine-Tool Industry According to Shift, June 1941*

Shift schedule	Number of plants	Employees working on—					
		First shift		Second shift		Third shift	
		Number	Percent	Number	Percent	Number	Percent
All shifts	85	48,211	68.6	17,329	24.6	4,765	6.8
1-shift plants	4	1,139	100.0				
2-shift plants	55	26,194	76.9	7,870	23.1		
3-shift plants	26	20,878	59.5	9,459	26.9	4,765	13.6

TABLE 2.—*Employment in 2-Shift Machine-Tool Plants, June 1941*

Percent of employees on second shift	Number of plants	Employees		
		Number	Percent working on—	
			First shift	Second shift
Total	55	34,064	76.9	23.1
Over 30 percent	9	6,584	64.6	35.4
20 to 30 percent	17	9,517	74.4	25.6
10 to 20 percent	24	16,985	82.2	17.8
Less than 10 percent	5	978	92.1	7.9

TABLE 3.—*Employment in 3-Shift Machine-Tool Plants, June 1941*

Percent of employees on added shift	Number of plants	Employees			
		Number	Percent working on—		
			First shift	Second shift	Third shift
Total	26	35,102	59.5	26.9	13.6
Over 50 percent	3	6,249	45.9	31.3	22.8
40 to 50 percent	5	14,137	56.2	28.7	15.1
30 to 40 percent	8	9,253	64.9	26.8	8.3
20 to 30 percent	8	4,861	73.3	18.0	8.7
Less than 20 percent	2	502	85.9	12.2	1.9

As the survey was restricted to the larger plants in the industry (100 employees or over) it is of interest to note any variation in operating schedules that exist in the surveyed plants when grouped in size classes. As shown in table 4 below, the largest plants (1,000 employees or over) were operating the heaviest shift schedules. In

these plants, 35 percent of the workers were employed outside the main shift. In the smallest plants, those with between 100 and 250 employees, less than 20 percent of the plant force was on the added shifts. Slightly more overtime was being worked in the smaller plants than in the large plants.

TABLE 4.—*Distribution of Plants by Size*

Number of employees in plant	Number of plants	Employees working on—					
		First shift		Second shift		Third shift	
		Number	Percent	Number	Percent	Number	Percent
Total	85	48,211	68.6	17,329	24.6	4,765	6.8
1,000 or more employees	19	31,103	64.7	12,736	26.5	4,259	8.8
500 to 1,000 employees	13	7,165	76.6	2,052	21.9	140	1.5
250 to 500 employees	22	5,726	74.2	1,640	21.2	356	4.6
Less than 250 employees	31	4,217	82.2	901	17.6	10	.2

Wide variations existed among the surveyed plants in the number of hours per week which the plant operated. In the 2-shift plants weekly schedules in the individual plants ranged from 85 to over 150 hours and in 3-shift plants from 120 to 168 hours during the week. The average hours worked per week for all workers in 2-shift plants was 54.5 as compared with 49.7 for workers in 3-shift plants. The average for each worker was highest in 2-shift plants operating between 130 and 140 hours per week. In these plants the average hours worked during the week was 60.7. In 2-shift plants working longer schedules than 140 hours, individual worker averages declined as the result of staggering of shifts. Table 5 shows the distribution of multi-shift plants according to weekly operation schedules.

TABLE 5.—*Distribution of Multi-Shift Plants According to Number of Hours Operated per Week*

Plant hours per week	Number of plants	Total number of wage earners	Average weekly hours per wage earner	Average hours of overtime per overtime worker
Two-shift plants with weekly hours of—				
Less than 100	3	859	46.0	7.7
100 to 109.9	16	3,748	51.7	11.7
110 to 119.9	18	19,584	53.8	14.4
120 to 129.9	8	3,336	56.7	15.2
130 to 139.9	3	1,845	60.7	21.2
Over 140	6	4,656	58.3	16.3
Total	55	34,064	54.8	14.4
Three-shift plants with weekly hours of—				
120 to 129.9	2	446	50.5	11.1
130 to 139.9	3	1,038	52.2	12.8
140 to 149.9	7	9,717	49.7	11.1
150 to 159.9	5	4,229	52.1	13.0
Over 160	9	19,672	48.7	9.4
Total	26	35,102	49.7	10.5

EXECUTIVE ORDERS SUSPENDING 8-HOUR DAY

War Department Projects [1]

APPLICATION of the 8-hour law was suspended for laborers and mechanics employed by the War Department in the construction within the United States of public works which are necessary for the national defense, under the terms of an Executive order issued on August 8, 1941. Similar action has previously been taken with respect to labor on projects in outlying areas.[2] For hours in excess of 8 per day the overtime pay is to be not less than one and one-half times the regular hourly rate of wages.

Section 1 of the act of August 1, 1892 (27 Stat. 340), as amended by the act of March 3, 1913 (37 Stat. 726 (U. S. C., title 40, section 321)), provides that the 8-hour day shall apply for laborers and mechanics employed by the Government on any public work of the United States except in case of extraordinary emergency.

Previous legislation authorized contractors and subcontractors engaged in building for the War Department to use workers in excess of 8 hours daily. Thus, a disparity existed as between the standards of employment on projects for which contracts were let and those carried out by the War Department. This situation, combined with the acute shortage of skilled labor, made it difficult to obtain and retain adequate personnel on War Department work.

The 8-hour day law was suspended for the categories of labor mentioned for the duration of the emergencies proclaimed by the President on September 8, 1939, and May 27, 1941.

Public Works in Hawaii [3]

By Executive order of August 20, the 8-hour day law is suspended insofar as it applies to mechanics and laborers employed by the War Department in the Territory of Hawaii. The suspension is designed to facilitate the defense effort and is to be in effect for the duration of emergency. Similar action was taken previously with respect to employees of these categories in other outlying areas.[4]

WORKING AGREEMENTS FOR SHIPBUILDING INDUSTRY

NATION-WIDE stabilization of the shipbuilding industry for the duration of the emergency has been established under agreements

[1] Federal Register. August 15, 1941 (p. 4069).
[2] See Monthly Labor Review for August 1941 (p. 479).
[3] Federal Register. August 22, 1941 (p. 4289).
[4] See Monthly Labor Review for August 1941 (p. 479).

ratified by shipbuilding firms and unions on the Atlantic and Pacific Coasts and in the Great Lakes and Gulf Coast regions.[1] The terms of the Pacific Coast agreement establishing zone standards were summarized in an earlier issue of the Monthly Labor Review;[2] those for the remaining three regions are shown below.

Each agreement is for 2 years and was approved by the Office of Production Management, the United States Navy, and the Maritime Commission. At the end of 1 year wage rates are subject to adjustment on the basis of changes in the cost of living. Machinery is provided to settle grievances, and strikes and lock-outs are banned. Limitation on production is forbidden.

The agreement for the *Atlantic Coast* shipbuilding industry specifies a basic hourly wage rate of $1.12 for first-class skilled mechanics, with corresponding percentage changes for other employees. Pay for overtime in excess of the standard 40-hour week is at time and one-half, with double time for work performed on Sundays and holidays.

For *Great Lakes* shipyards a basic hourly wage of $1.12 is fixed for the standard first-class mechanics, with corresponding percentage increases for all other hourly paid employees. Shift work is permitted, with a 40-cent differential for second- and third-shift workers for each full-shift period.

Time and a half is authorized for work in excess of 8 hours in 1 day or 40 hours in 1 week, and for all Saturday work, with double time for Sundays and holidays.

Restrictions are imposed on the use of "premium men." Premiums now being paid for special skills above basic mechanic's wage will be maintained, but neither the number of premium men nor the amount of the premium may be increased without official Navy and/or Maritime Commission approval.

In *Gulf Coast* shipyards, the basic wage is $1.07 an hour for standard skilled mechanics, with "equitable raises" for other employees, a 40-cent additional payment for second and third shifts, time and one-half for overtime, with double time on Sundays and holidays, and double time for all ship repair except large Government conversion jobs.

SUSPENSION OF SATURDAY HALF-HOLIDAY IN HAWAII[3]

THE provision of law granting a Saturday half-holiday to certain Federal employees was suspended by Executive order of August 20, for all civil employees of the War Department and the Coast Guard

[1] U. S. Office of Production Management. Labor Division. Press release Nos. 562, 882, and 1037.
[2] See Monthly Labor Review for May 1941 (p. 1162).
[3] Federal Register. August 22, 1941 (p. 4289).

and their field services engaged in the performance of labor or duties in the Territory of Hawaii. This suspension conforms with previous action with respect to such employees engaged in other areas [1] and is a defense measure taken for the duration of the emergency.

NYA WORK PROGRAM FOR DEFENSE

ON JULY 1, 1941, the youth work defense program was inaugurated as a special project by the National Youth Administration to enable out-of-school youth to acquire work experience and to prepare them for employment in defense industries. The National Youth Administration Appropriation Act of 1942 provided $60,000,000 for this purpose. The direct objective of this legislation is the preparation of 368,000 young persons for employment in private defense jobs in 12 months, ending June 30, 1942.[2]

Under the program for defense the kinds of jobs open to NYA youth are for the most part manual operations in the metal and mechanical lines. The primary emphasis is on the preparation of these young people to do necessary jobs in the aviation, shipbuilding, and machine-tool industries, and in other bottle-neck industries.

Several thousand mechanical workshops already in operation under the National Youth Administration are being utilized to give young persons practical experience. In these shops "production is organized on a basis similar to that obtained in private industry. Large-production methods and assembly-line techniques are employed wherever practicable."

Among the shops used in the defense program are those engaged in the following activities: Aviation mechanics, machine work, sheet-metal work, welding, pattern making, electrical work, radio, forge, foundry, and industrial sewing.

Some of these shops are resident centers (camp-type projects) where the young people live as well as work. Those who reside at the center pay for their subsistence on these projects by a pay-roll deduction from their gross wage which is somewhat higher than the wage paid to young people on nonresident projects.

The greater number of the workshops are of the nonresident or local type. Young workers on local projects live at home and report for their NYA employment in the same way as they would in private industry.

Related Training

In addition to the practical experience the workers acquire, they take specific training in public vocational-school shops and classes.

[1] See Monthly Labor Review for August 1941 (p. 479).

[2] United States. National Youth Administration. Youth, Jobs and Defense. Washington, 1941.

In illustration, in localities in which the vocational schools have the requisite facilities, classes will be organized in courses related to the work being done on work projects sponsored by the NYA. In sections in which the vocational schools have not the requisite training facilities, such schools will use the NYA equipment but furnish the instructors required for the classes. The local vocational-school systems are reimbursed for the expense of providing classroom instruction to NYA workers through an appropriation administered by the United States Office of Education.

Cooperation by State Employment Services

Youth who apply to the State employment services for defense work, who are in need of jobs but have no experience and training for such work, are referred to the National Youth Administration. When these young persons meet the requirements of the NYA and when NYA work is available, they may be employed under the defense program.

Recommendations of the State employment services largely determine the types of practical work experience and related training which are made available to the youth employed. These recommendations are based on actual requests from private industry for workers for given occupations. In determining the jobs for which young people are to be fitted, both the immediate and the anticipated demands of private industry are taken into account. The defense program operates on a two- or three-shift-a-day basis, and the maximum number of youth employed during any given month will not exceed 100,000. However, it is anticipated that there will be a complete turn-over of youth every 3 months.[1]

Wages and Hours

Under the NYA work program for defense, young persons are employed 160 hours per month less the number of hours they attend related training classes. For instance, in localities where they spend 60 hours per month in the related training classes carried on by the vocational schools, they are employed 100 hours per month on NYA work. The wages "that young people on local projects receive from the National Youth Administration for the national defense projects vary between $22 and $25 a month, depending on geographical location." The gross wage at resident centers is $20 per month for part-time and $30 for full-time work.

Production for Public Agencies

The work performed by young persons on NYA defense projects is done for public agencies. For instance, the workshops in which they are engaged produce cots and lockers for the United States Army,

duffle bags and minor torpedo parts for the United States Navy, garbage cans for municipal departments of sanitation, recreational equipment for public parks, dies and tools for other workshops of the NYA, and numerous similar items.

In order to eliminate any competition with private industry, none of these products are sold in the open market, and to avoid the displacement of persons regularly employed, only jobs not included in the regular budgets of sponsoring agencies are undertaken.

The NYA program for defense work employs both young men and young women. The young women's jobs are similar to those in which women are currently employed in national defense industries, and include light machine work, machine inspection, electrical and radio work, and industrial sewing.

The aim of the defense program is to enable young people to develop a single skill and to do a specific job such as operating a lathe, drill press, or a welder. Safety practices, ability to follow directions, punctuality, and good workmanship are emphasized. In this manner youth are equipped to contribute immediately to increased defense production when they are placed in private industry.

Placement in Private Industry

The State employment services handle the greater part of the work of placing youth in defense industries. "All young people employed by the National Youth Administration are required to maintain active registration with their State employment services and to accept any bona fide offer of private employment that may become available." The records of NYA workers are furnished from time to time to the State employment services. These reports note the progress made and any additional qualifications such workers may be acquiring so that when suitable opportunities become available these young people may be referred to private employers who have requested workers similarly equipped.

The Director of Defense Training for the Federal Security Agency is directing and supervising the work of the National Youth Administration, the State employment services, and the public vocational schools—all of which agencies are cooperating in the youth defense-work program. To facilitate the coordination of this program, a council has been created in each State with 3 members—the State Youth Administrator, the State Director of the Employment Service, and the State Director of Vocational Education, or their representatives.

To be eligible for work on the NYA defense program, young persons "must be citizens of the United States, 17 through 24 years old, out of school, and in need of jobs." Each employee is obliged to take an oath of allegiance to the United States, which certifies also that the applicant for the job "is not a member of any organization which advocates overthrow of the Government by force or violence."

Foreign Wartime Policies

OCCUPATIONAL BASIS OF DRAFT DEFERMENT IN GREAT BRITAIN [1]

ON THE day that Britain declared war on Germany, September 3, 1939, the National Service Act was put into effect creating a conscription program which made all men between 18 and 41 years of age liable for military service. Responsibility for the conscription program was entrusted to the Ministry of Labor and National Service to be administered through its 1,563 employment offices.[2] This agency's nation-wide organization, trained staff, and knowledge of labor-market conditions made it particularly well equipped for the task.

An initial step in the program was the registration at the employment offices of all men of military age (18 to 41). An expert in occupational classification questioned each registrant concerning his present occupation and previous work experience. On the basis of this information the registrant was given a code number indicating his occupational classification. The accuracy of the classification was immediately checked by correspondence between the Ministry and the registrant's employer or others qualified to pass judgment. The classification as finally established provided the key for the decision as to whether the man could best serve his country in the armed forces or in industry.

Schedule of Reserved Occupations

The Ministry has drawn up a master blueprint for the allocation of Britain's manpower which is called the "Schedule of Reserved Occupations and Protected Work." The schedule is an occupational list setting forth the conditions under which men in specified occupations are reserved for service in industry. This reservation means that the individual will not be called up for military service and in most cases will not be accepted for such service even though he volunteers.

[1] This article is based on publications of the British Ministry of Labor and National Service and data made available by the British Library of Information, New York, N. Y.

[2] According to the 1941 Handbook of the Ministry of Labor and National Service (p. 13), there are 507 employment exchanges situated in the more important areas. Less important areas are served by 265 employment offices, 450 branch employment offices, and 341 local agencies.

The schedule was designed to meet different degrees of occupational shortage. In occupations in which marked shortages of qualified workers were already theatening the success of the defense production program, all men were reserved. In other occupations in which a surplus of workers was known to exist, no reservation was established. Between these two extremes were those occupations in which different degrees of shortage were expected to develop if men were drawn from them to serve in the armed forces. To meet this latter situation a flexible system of reservation by age groups was utilized. The general principle of this system is illustrated in the following simplified situation: It is assumed that 2,600 blast-furnace tenders are required for necessary industrial activity and there are in the entire country 3,000 blast-furnace tenders with the cumulative age distribution shown in the accompanying statement.

Cumulative age distribution:	*Number*
18 years of age and over	3,000
20 years of age and over	2,800
22 years of age and over	2,600
24 years of age and over	2,400

The necessary 2,600 workers would be assured by reserving all those individuals 22 years of age or over. This system allows for adjustment to changes that take place in the demand for blast-furnace tenders. If expansion in steel-plant capacity were planned which would increase the required number of blast-furnace tenders to 2,800, the age of reservation in the schedule would be changed and all those 20 years of age and over would be reserved.[3] Actually, the determination of an age of reservation is somewhat more complicated. Account must be taken of men who will not be accepted into the armed forces, because they are physically unfit for military duty or are deferred for other reasons. Many of these individuals will be employed in defense industry even though they are not given reservation.

Sources of Labor-Market Information

It is obvious that the efficient functioning of the system of reservation by age groups required accurate and up-to-date statistics on the labor-market situation. The occupational information obtained by the registration of men of military age has been supplemented by registrations of women and older men at the employment offices. Additional information was obtained by special registrations of workers qualified to perform work in certain essential industries such as shipbuilding and steel manufacture. Although not specifically designed to gather occupational information, the general

[3] This system of occupational deferment was developed by Mr. G. H. Ince, Under Secretary at the Ministry of Labor and National Service. In May 1941 he was made Director General of Manpower.

registration of the entire population held in September 1939 did provide some useful data.

The Ministry is in an excellent position to gauge the demand for labor because both industry and the armed forces come to it with their requests for additional manpower. Under the Emergency Powers Act of May 1940 the Ministry may specify groups of employers who are required to notify the Ministry's employment offices of any vacancy and to fill the vacancy through such offices. As chairman of a policy-making committee, known as the "Production Executive," the Minister of Labor and National Service meets with the representatives of the Ministries of Supply, Aircraft Production, the Admiralty, and the Board of Trade to consider questions of war production and their effect upon the labor requirements. Thus, with a knowledge of the supply of and demand for workers in various occupations the Ministry is able to adjust the ages of reservation for each occupation so as to obtain the most effective allocation of manpower.

Military Versus Industry Demands for Workers

The Ministry realized that, to keep in repair the instruments of modern warfare, large numbers of skilled workers were needed in the armed forces. The entrance of skilled workers into the armed forces presented a special problem because this demand was in conflict with a similar demand from essential industries. The Ministry decided to allow the entrance of some of these workers into the armed forces, provided it was guaranteed that they would serve in a trade capacity. For example, although all aircraft joiners were deferred from general military service, the schedule provided that those from 18 to 21 years of age might be called for service in the armed forces in a trade capacity. Special arrangements were also worked out which made it possible for the armed forces to call for volunteers to fill highly technical posts and apply for the operation of the schedule to be waived in respect to such volunteers.

The worker's position under the schedule is periodically reviewed. If a man is found to have left his reserved occupation, steps are taken to call him up for military service. Persons normally employed in reserved occupations continue to be regarded as reserved under the schedule even though they may fall temporarily out of employment. In exceptional cases, the calling up of men employed in occupations not reserved in the schedule can be deferred on the ground that the work being undertaken by the employer is of vital importance and would be interfered with if the workers concerned were taken away from it immediately. It is interesting to note that, although women are not liable for military service, those in certain occupations important to the war effort are listed in the schedule as being reserved at their occupations and are not allowed to volunteer for full-time civil-defense work.

GAUGE OF IMPORTANCE OF INDUSTRY

As Britain's war effort expanded and the demands of the armed forces and of defense industry became greater, the Ministry found it necessary to modify its principle of occupational deferment so as to take into account the importance of the industry in which the man was employed. Men in critical occupations had been deferred regardless of the industry in which they were employed, in order that those in nondefense employment would be available when defense industries expanded. However, when considerable expansion in the labor requirements of defense industries took place the Ministry found it difficult to secure the transfer of workers to such employment. Under the Emergency Powers Act the Ministry of Labor and National Service had the power to demand such transfers, but it showed a reluctance to use compulsion. As an alternative the Ministry revised the schedule so as to make workers in nondefense industries more liable for induction into the armed forces. This procedure operates as follows: The schedule now lists two ages of reservation for many occupations, the lower age being for employees of firms included in the register and the higher age for workers at other establishments. For example, steel benders employed by firms included in the register are deferred from military service if they are 25 years of age or over. Steel benders employed by establishments not on the register are deferred only if they are 35 years of age or over.

In order to distinguish between defense and nondefense employment, a register of individual firms important to the defense effort was drawn up by the Ministry of Labor and National Service. In cases where firms were engaged in both defense production and nondefense production, only those portions of the establishment directly connected with the defense program were eligible for inclusion in the register of protected establishments. Thus, the reservation of a man of military age was increasingly made to depend not only on his occupation or age but likewise on the importance of the work performed.

The entire system of occupational deferment has been designed to insure flexibility, to allow adjustment to the rapidly changing labor-market situation. The Ministry keeps in close touch with the needs of industry and the armed forces; and the Schedule of Reserved Occupations and Protected Work is periodically revised to meet changes in manpower requirements. By these means, the skill and effort of the population may be efficiently allocated to the successful prosecution of the war.

PROVISIONS FOR SOLDIERS' DEPENDENTS IN SOUTH AFRICA

IN South Africa dependents of volunteers in the armed forces are provided for by the State, by employers, and by other schemes. A brief account of various provisions is here given.[1]

State Allowances

The grants made by the State for the dependents of enlisted men are made possible through general taxation. The volunteer himself, however, must allot not less than half of the pay received in his particular rank. The allowances are on a uniform scale, regardless of local variations in cost of living. Paymasters' offices have been opened in 10 cities.

The State makes these grants under three general procedures, the first for soldiers' dependents who are of European races; the second for wives and children of colored and Asiatic soldiers; and the third for the family responsibilities of the Bantu natives in the South African forces.

Allowances are made to legal wives, separated and divorced wives for whom a court order has decreed maintenance, legitimate and illegitimate children, stepchildren living in the enlisted man's household, and the legal guardian of separated children. The total allowance of 4s. 6d. per day for wives is based on an allowance of 2s. 6d. for quarters, a family allowance of 1s., and an allowance of 1s. for rations. The basic daily rates of pay and allowances of the South African forces are as follows:

Basic Daily Rates of Pay and of Allowances of the of Men in South African Forces

Rank	Pay	Allowances			
		Quarters	Rations	Family	Each child under 18
	s. d.	s. d.	s. d.	s. d.	s. d.
Private	3 6	2 6	1 0	1 0	1 0
Lance corporal	5 0	2 6	1 0	1 0	1 0
Corporal	6 0	2 9	1 0	1 0	1 0
Lance sergeant	6 6	2 9	1 0	1 0	1 0
Sergeant	9 6	3 3	1 0	1 0	1 0
Staff sergeant	10 6	3 3	1 0	1 0	1 0
Second-class warrant officer	13 0	3 9	1 0	1 0	1 0
First-class warrant officer	15 0	3 9	1 0	1 0	1 0

The rates vary slightly in different branches of the army, but the allowances for dependents are based on the same scale. As shown in the above table, family and rations allowances do not vary according to rank, but the allowances for quarters range from 2s. 6d. per day for a private's wife to 3s. 9d. per day for a warrant officer's wife.

[1] South African Journal of Economics (quarterly journal of the Economic Society of South Africa), Johannesburg, December 1940: State and Private Provisions for Soldiers' Dependents.

Allowances for dependents other than wives or children are based on another formula and are not automatically paid.

In order to qualify for such allowances the volunteer must allot not less than half of his basic pay for his rank to his dependents (but if he is married and has already allotted this to his wife it is not necessary to make a further allotment); secondly, it is necessary to establish proof that the volunteer contributed to the support of these dependents and the amount of such support; thirdly, that he (and, if married, his wife) is unable, under present circumstances, to continue such support; and, finally, that the dependent is actually in need of the allowance (this is not interpreted in terms of absolute need but in relation to the loss of income sustained as a result of the volunteer's enlistment). The general principle laid down is that the allowance together with the allotment shall not exceed the amount contributed by the volunteer prior to enlistment. In practice this is, however, being interpreted that the total present income of the dependent, whatever its source (whether by virtue of employer's contribution of part pay, employment of dependent who may not previously have worked, etc.) may not exceed the pre-service contribution of the volunteer, minus the estimated costs of his pre-service keep (if he were living with the dependent).

No married rates of pay are applicable to the members of the Women's Auxiliary Air Force or the Women's Auxiliary Army Service. The rate of pay of these women is fixed at 6s. 6d. per day if the member supplies her own accommodation and rations (rate of pay per day, 3s. 6d; allowance for rations and quarters, 3s).

Non-European dependents.—Allowances for the dependents of men in the Cape Corps and the Indian Service Corps are restricted to their wives and children, and the rates are not the same as for the European forces.

The married privates of the Native Military Corps are paid at a higher rate than single privates, and allot a part of their pay to their dependents.

Contributions by Employers

Employers could not be compelled to pay part of the wages of volunteers to their dependents. However, efforts have been made to encourage such voluntary contributions. The State, Provincial, and civic administrations have instituted procedures which the business community has followed as best it could.

With regard to State employment, married and single men are treated alike in that the difference between civilian and military pay is made up (where military pay exceeds civilian pay no allowance is made). Employment is considered to be continuous so that annual increments and other privileges accrue. After considerable efforts on the part of woman civil servants the previous ban on their attesting for full-time service has been removed and they are now to be treated on the same principle of making up the difference between civilian and military pay. The principle adopted by most municipalities is either that of following the above system or, more usually, paying half pay to married volunteers, quarter pay to single men and considering single men with dependents on their individual merits, with the object of approximating their condition to that of married men.

The Transvaal Chamber of Mines places its men with dependents on half pay and those without dependents on quarter pay and also grants medical benefits and savings allowances. The Natal sugar industry in all cases makes up the difference between the civilian and the military pay and disregards promotion after enlistment. The Federated Chamber of Industries has recommended to its constituent bodies that their married male employees be granted half of their normal pay, single men without dependents one-quarter pay, and single men with dependents up to half pay. It is provided, in general, that the military pay and allowance, together with the employer's grant, should not be greater than the man's previous income. The chambers of commerce have recommended measures along the same lines to their members, although the suggestion is not always made that the total income for military service and from employers should not be higher than pre-enlistment earnings.

Information from different sections of the country "indicates that there is a genuine attempt to comply with the recommendations made, but naturally there is some individual variation, depending very largely upon the size of the firm, its resources and reserves, the proportion of men who have enlisted, and the proportion that the wage bill bears to total costs."

The schemes referred to above are almost wholly restricted to the permanent personnel in professional, executive, administrative, clerical, and certain industrial occupations. In some industries in which labor mobility is considerable, war-benefit funds to which both employers and employees contribute have been established.

Information concerning the proportion of volunteers actually receiving contributions from employers, and the amounts of those contributions, by industries, by commercial enterprises, geographical regions, or individual towns, is not obtainable. It is, therefore, not possible to estimate the financial costs to the industrial, commerical, and professional communities of the existing voluntary South African schemes for soldiers' family allowances.

No resolutions on the subject have been passed by chambers of industry and commerce, but "there is within these bodies as also in the community in general, a steadily growing volume of opinion that the present voluntary system, with its unavoidable inequities, should give way to a national system, in which, by means of a special dependents' (or defense) tax, every member of the community would be assessed in accordance with his ability to pay."

Governor General's National War Fund

Although defense allowances may be improved in the matter of eligibility, classification of dependents, the amounts of grants, and administration, some families will always need additional aid. The

fact that all families are not now receiving employers' allowances makes it imperative to have some kind of flexible organization to deal with especially unfortunate situations. The general policy of the Governor General's National War Fund, which is supported by the community, is to accept "the obligation of making such provision for soldiers' dependents, as will enable the family to be maintained in a condition of reasonable comfort, and as far as possible, at the same standard as that enjoyed prior to the volunteers' enlistment."

Employment and Labor Conditions

WPA UNEMPLOYMENT ESTIMATES

THE Work Projects Administration's Monthly Report of Unemployment represents the first attempt to obtain current data on the size of the labor force and unemployment through actual monthly field counts. Unemployment in August was estimated at 5,300,000 out of a labor force of 55,800,000 persons, exclusive of those in the armed forces.

These data are significant because they present a picture of the labor force as in a continuous state of flux, rather than as a static segment of the population. Characteristically most men of working age and a considerable proportion of the women are continuously in the labor market, either working or looking for work. But large numbers of school children enter the labor market during the summer months, and significant numbers of adults also enter and withdraw from the labor market from time to time. From February to July of this year, the total number in the labor force increased by 3,600,000. As a result, despite an increase of 4,800,000 in employment, the number seeking work declined by only 1,200,000. Even in months when the entrance of school children is not a factor, substantial fluctuations in the labor force are shown. Thus, between November and December of last year the labor force declined by 700,000. With a decline of 200,000 in employment, unemployment declined by 500,000.

TABLE 1.—*Estimated Civilian Labor Force, Employment, and Unemployment, April 1940–August 1941*

Month and year	Estimated number (millions of persons)			Month and year	Estimated number (millions of persons)		
	Labor force	Employed	Unemployed [1]		Labor force	Employed	Unemployed [1]
1940				*1941*			
April	53.9	45.1	8.8	January	52.8	45.2	7.6
May	54.7	46.3	8.4	February	52.7	45.5	7.2
June	56.3	47.7	8.6	March	52.4	45.6	6.8
July	57.0	47.7	9.3	April	53.3	46.7	6.6
August	56.7	47.8	8.9	May	54.0	48.3	5.7
September	55.2	48.1	7.1	June	55.7	49.8	5.9
October	54.8	47.4	7.4	July	56.0	50.4	5.6
November	53.9	46.3	7.6	August	55.8	50.5	5.3
December	53.2	46.1	7.1				

[1] Includes persons on public emergency work projects, including NYA student work projects.

During the period from April 1940 to August 1941, the number of persons unemployed declined from 8,800,000 to 5,300,000. With the beginning of the school year in September, a further decline in unemployment may be expected.

The reduction in unemployment during the past 16 months affected the various age groups quite differently. There was an increase of about 750,000 (apart from seasonal changes) in employment of persons under 24, despite a substantial reduction in the labor force of these ages as a result of inductions into the armed forces. The number unemployed in this age group declined from about 4,000,000 last summer to about 2,200,000 this August, or from over 25 percent to only slightly over 15 percent of the labor force. The seasonal withdrawals from the labor force in September will further reduce unemployment in this age group.

The effect of inductions into the armed forces in the age group 25–54 was less important, and the decline in the labor force in this age group was slight. Employment increased by about 1,500,000, while unemployment declined from over 4,000,000 to 2,200,000, or from about 12 percent to less than 7 percent of the labor force. This was a sharper decline than that shown by either of the other two age groups.

The increase in employment in the age group over 55 was proportionately larger than that in either the younger or the middle-age group, and was accompanied by an increase of 500,000 in the labor force. Practically all of the increases took place since March of this year. While the unemployment rate declined less than in other groups, the fact that 500,000 additional older workers have been drawn into the labor market is notable.

The WPA data are based on a monthly survey of a carefully selected cross section of the population. Sample households are selected at random within a group of 54 counties in 38 States, chosen as representative of the country as a whole. The same definitions and in general the same enumeration procedures are used as in the Population Census of 1940.

Comparison With 1940 Census

In order to make possible direct comparison with Census figures, the April 1940 survey was arranged to coincide with the Census date. Comparisons between the two sets of data indicate fairly close agreement, as shown in the following figures. There is only an insignificant difference between employment totals shown by the two surveys, though the WPA unemployment and labor-force figures are both somewhat higher than the preliminary Census estimates. Part of this difference appears to be due to the fairly large group whose labor-

market status was reported as "unknown" in the preliminary Census reports. Moreover, the Census total for public emergency workers was about 1 million less than the number on the pay rolls of Federal emergency work agencies at the time of the Census, while the similar undercount in the WPA survey appears to have been considerably smaller. Final tabulations by the Census will probably reduce the number of unknown and misclassified items, and thereby bring the two sets of data into closer agreement.

	WPA (millions)	*Census*[1] *(millions)*
Total noninstitutional civilian population 14 years of age and older	99. 4	99. 4
Labor force	53. 9	52. 5
Employed	45. 1	45. 0
At work	43. 7	43. 7
Not at work but having jobs	1. 4	1. 3
Unemployed	8. 8	7. 5
On public emergency work	2. 7	2. 4
Seeking work	6. 1	5. 1
Not in labor force	45. 4	45. 1
Engaged in home housework	29. 4	28. 8
At school	9. 3	9. 1
Unable to work	5. 1	5. 2
Other	1. 6	2. 0
Labor-market status unknown	. 1	1. 8

[1] Sixteenth Census of the United States, 1940, Release P–4, No. 5. (April 25, 1941.) Figures for total population, labor force, and employed exclude an estimated 355 thousand men in the armed forces in continental United States. Figures for total population and persons not in labor force exclude 1,226 thousand persons in institutions.

Rural-Urban Differences

The direct enumeration of the working population on a sample basis each month facilitates further analysis in much greater detail than is possible in connection with other current estimates. In addition to more accurate summary figures, this survey permits compilations of monthly data on the basis of such characteristics as urban-rural residence, age, sex, and hours of work.

Fluctuations in employment, unemployment, and the size of the labor force were greatest in rural counties throughout the period from April 1940 to August 1941, reflecting seasonal changes in agricultural activity. The five largest cities, on the other hand, experienced the smallest amount of month-to-month change. The percent unemployed among the population 14 years of age and over was consistently highest in the five metropolitan centers and lowest in the rural counties. Percentage estimates of employment, unemployment, and the labor force since April 1940 for the urban and rural counties, with the five largest cities (New York, Chicago, Philadelphia, Detroit, and Los Angeles) reported separately, are shown in table 2.

TABLE 2.—*Percentage Estimates of Labor Force, Employment, and Unemployment, Urban and Rural Counties and 5 Largest Cities, April 1940–August 1941*

[Figures are expressed as percent of noninstitutional civil population 14 years of age and over in each area]

Month and year	Labor force [1]				Employed [1]				Unemployed			
	United States	Five largest cities [2]	Other urban counties [3]	Rural counties [4]	United States	Five largest cities [2]	Other urban counties [3]	Rural counties [4]	United States	Five largest cities [2]	Other urban counties [3]	Rural counties [4]
1940												
April	54.3	58.5	55.2	51.1	45.4	48.3	45.9	43.3	8.9	10.2	9.3	7.8
May	55.0	57.3	55.2	53.8	46.5	46.6	46.0	47.3	8.5	10.7	9.2	6.5
June	56.6	57.3	57.0	55.8	47.9	46.2	47.3	49.5	8.7	11.1	9.7	6.3
July	57.3	58.8	58.3	55.3	47.9	46.0	47.8	48.8	9.4	12.8	10.5	6.5
August	57.0	58.5	58.1	54.7	48.0	46.3	48.2	48.4	9.0	12.2	9.9	6.3
September	55.4	57.0	56.0	53.9	48.3	47.5	47.8	49.3	7.1	9.5	8.2	4.6
October	55.1	58.7	55.7	52.7	47.6	48.6	47.7	47.1	7.5	10.1	8.0	5.6
November	54.0	58.3	54.7	51.2	46.4	48.6	46.6	45.3	7.6	9.7	8.1	5.9
December	53.4	58.2	53.9	50.7	46.3	49.0	46.4	45.1	7.1	9.2	7.5	5.6
1941												
January	53.0	58.3	53.5	49.9	45.4	48.0	45.8	43.5	7.6	10.3	7.7	6.4
February	52.8	58.3	53.4	49.8	45.6	48.3	46.0	44.0	7.2	10.0	7.4	5.8
March	52.6	58.1	53.1	49.5	45.8	48.2	46.3	44.0	6.8	9.9	6.8	5.5
April	53.7	57.1	53.8	51.9	47.0	48.7	47.1	46.0	6.7	8.4	6.7	5.9
May	54.4	57.2	54.3	53.4	48.7	50.2	48.5	48.3	5.7	7.0	5.8	5.1
June	56.2	57.7	55.9	56.2	50.2	50.2	49.7	51.1	6.0	7.5	6.2	5.1
July	56.5	59.1	56.2	55.8	50.9	51.0	50.6	51.2	5.6	8.1	5.6	4.6
August	56.3	58.7	56.1	55.6	51.0	51.0	50.6	51.5	5.3	7.7	5.5	4.1

[1] Excludes persons in the armed forces.
[2] New York, Chicago, Philadelphia, Detroit, and Los Angeles.
[3] Counties with a 1940 population of 45,000 or over, except those including the five largest cities.
[4] Counties with a 1940 population of less than 45,000.

Age Differences

The unemployment rate among the population 14 to 24 years of age was consistently higher throughout the year beginning April 1940 than that for any of the other age groups in the United States. In the month of July 1941 when the supply of labor was at its peak, the rate of unemployment among the population in the youngest age group was twice as high as that of the age group 25 to 54 years.

The differences in the incidence of unemployment already noted between urban and rural areas hold for each of the three age groups as well as for all ages combined. Unemployment rates were lowest in the rural counties and highest in the five metropolitan centers among all age groups.

There was a marked increase of rural youth in the labor force during the spring and summer months, reflecting in large part the seasonal upturn in agricultural activity which brought with it a corresponding rise in the number of available jobs. In the five metropolitan centers, however, and to a large extent in the other urban areas also, the influx of students into the labor market during the summer months does not appear to coincide with any seasonal increase in employment.

TABLE 3.—*Labor Force and Unemployment, by Age Groups, April 1940–August 1941*

Year and month	Labor force (millions of persons)				Number unemployed (millions)			
	Total, all ages	14–24 years of age	25–54 years of age	55 years of age and over	Total, all ages	14–24 years of age	25–54 years of age	55 years of age and over
1940								
April	53.9	11.9	33.8	8.2	8.8	3.1	4.5	1.2
May	54.7	12.6	33.7	8.4	8.4	3.0	4.2	1.2
June	56.3	14.2	33.7	8.4	8.6	3.6	3.9	1.1
July	57.0	15.2	33.5	8.3	9.3	4.1	4.0	1.2
August	56.7	14.9	33.5	8.3	8.9	3.8	3.9	1.2
September	55.2	12.8	34.0	8.4	7.1	2.6	3.4	1.1
October	54.8	12.2	34.4	8.2	7.4	2.5	3.7	1.2
November	53.9	12.0	33.8	8.1	7.6	2.6	3.8	1.2
December	53.2	11.5	33.5	8.2	7.1	2.4	3.6	1.1
1941								
January	52.8	11.3	33.3	8.2	7.6	2.6	3.8	1.2
February	52.7	11.1	33.3	8.3	7.2	2.4	3.6	1.2
March	52.4	11.0	33.2	8.2	6.8	2.3	3.4	1.1
April	53.3	11.8	33.0	8.5	6.6	2.2	3.3	1.1
May	54.0	12.1	33.3	8.6	5.7	2.0	2.7	1.0
June	55.7	13.8	33.3	8.6	5.9	2.3	2.6	1.0
July	56.0	14.3	33.0	8.7	5.6	2.3	2.4	.9
August	55.8	14.0	33.1	8.7	5.3	2.2	2.2	.9
	Unemployment rate [1]				Unemployed: Percentage distribution			
1940								
April	16.4	26.4	13.3	15.1	100.0	35.4	50.5	14.1
May	15.4	23.9	12.5	14.7	100.0	35.7	49.7	14.6
June	15.3	25.5	11.5	13.6	100.0	42.1	44.7	13.2
July	16.5	27.4	12.2	14.4	100.0	44.2	43.2	12.6
August	15.7	25.7	11.6	14.7	100.0	43.0	43.4	13.6
September	12.8	20.7	10.0	12.6	100.0	37.3	47.7	15.0
October	13.6	20.8	10.8	14.6	100.0	34.2	49.7	16.1
November	14.9	21.8	11.3	14.4	100.0	34.4	50.2	15.4
December	13.3	21.4	10.8	13.4	100.0	34.4	50.4	15.2
1941								
January	14.4	23.6	11.4	14.2	100.0	34.9	49.8	15.3
February	13.6	21.9	10.7	14.2	100.0	34.1	49.6	16.3
March	13.0	20.8	10.2	13.8	100.0	33.4	49.9	16.7
April	12.4	18.7	10.1	13.3	100.0	33.2	49.9	16.9
May	10.6	16.2	8.3	11.4	100.0	34.2	48.6	17.2
June	10.6	16.9	7.9	11.1	100.0	39.4	44.5	16.1
July	10.0	15.8	7.4	10.5	100.0	40.3	43.4	16.3
August	9.5	15.5	6.8	10.2	100.0	40.8	42.5	16.7

[1] Unemployed as a percent of labor force in each age group.

TABLE 4—*Unemployment Rates,*[1] *by Age Groups and Urban-Rural Residence, for Selected Months in 1940 and 1941*

Month and year	All ages				14 to 24 years of age			
	Total	Five largest cities	Other urban counties	Rural counties	Total	Five largest cities	Other urban counties	Rural counties
1940: April	16.4	17.5	16.8	15.2	26.4	28.1	27.5	24.2
July	16.5	21.8	18.1	11.7	27.4	37.3	32.0	17.7
October	13.6	17.3	14.3	10.6	20.8	25.4	22.8	16.0
1941: January	14.4	17.7	14.3	12.9	23.6	26.3	24.5	21.0
April	12.4	14.6	12.5	11.3	18.7	20.4	18.4	18.5
July	10.0	13.8	10.0	8.2	15.8	21.0	16.8	12.7
	25 to 54 years of age				55 years of age and over			
1940: April	13.3	14.3	13.1	12.9	15.1	18.2	18.0	10.7
July	12.2	16.2	12.6	9.3	14.4	22.3	16.4	9.2
October	10.8	13.7	11.3	8.4	14.6	22.7	15.1	10.7
1941: January	11.4	14.5	11.0	10.3	14.2	20.7	14.4	11.5
April	10.1	12.4	10.1	8.8	13.3	17.6	14.7	10.0
July	7.4	10.9	6.9	6.2	10.5	16.0	11.7	7.2

[1] Unemployed as a percent of labor force in each age group.

Sex Differences

The rate of unemployment among woman workers in the United States was consistently higher than that of men throughout the period covered by the data. This was true not only for the country as a whole, but also in most months for counties of all size groups, though the difference was more marked in the rural counties.

Among male workers, the percent of the labor force unemployed was lowest in the rural counties and highest in the five largest cities. This relationship among the three size-of-place groups was maintained throughout the entire period from April 1940 to March 1941 despite seasonal variations in the unemployment rates.

No such consistent relationship was shown for woman workers. From May to September 1940 there was a wide disparity between the relatively low rates in rural areas on the one hand, and the higher rates in urban counties and five largest cities, on the other.[1] In July 1940 the unemployment rate for woman workers in the five metropolitan centers reached 25 percent compared with only 15 percent for rural counties. From October 1940 to March 1941, however, the differences among the three groups were much smaller, and the rural counties were supplanted by the urban group as the areas with the lowest unemployment rate among woman workers. The seasonal upswing in business activity during December resulted in a sharp decline in the rate of unemployment among females in urban counties and large cities, with no noticeable effect in the rural counties. Even at its lowest levels, however, the rate of unemployment among woman workers still remained higher than that of the men.

TABLE 5.—*Estimated Percent of Workers Unemployed, by Sex and by Size of Place, April 1940–March 1941*[1]

Month and year	Percent of male workers unemployed				Percent of female workers unemployed			
	United States	Five largest cities	Other urban counties	Rural counties	United States	Five largest cities	Other urban counties	Rural counties
1940								
April	16.2	17.9	17.1	14.3	17.0	16.9	16.2	18.9
May	14.6	18.4	15.6	11.8	17.8	19.9	19.7	13.5
June	14.1	19.0	15.7	10.1	19.1	20.5	20.9	15.3
July	15.0	20.5	16.5	10.8	20.9	25.3	22.5	15.0
August	14.1	19.8	15.0	10.7	20.3	23.7	22.5	14.2
September	11.9	15.9	13.7	7.7	15.5	18.6	17.1	11.1
October	12.8	16.8	13.9	9.5	16.0	18.6	15.5	15.0
November	13.5	16.0	14.7	10.6	16.0	17.9	15.5	15.9
December	13.1	15.8	14.4	10.2	13.9	15.8	12.8	15.1
1941								
January	13.8	17.2	14.0	12.0	16.5	18.9	15.4	16.9
February	12.8	16.9	13.3	10.5	16.1	17.7	15.3	16.7
March	12.3	17.8	12.7	10.2	15.1	17.8	13.5	16.6

[1] Represents latest month for which published data are available.

[1] In April 1940, however, this relationship was reversed.

Hours Worked by Employed Persons

Average hours of work increased by about 3 hours, or about 7 percent, from April 1940 to April 1941. The amount of increase was greatest in rural counties and lowest in the five largest metropolitan centers, average weekly hours of work in rural areas advancing about 6 hours over the 12-month period, compared with an increase of less than 1 hour in the metropolitan centers.

TABLE 6.—*Percentage Distribution of Employed Persons by Number of Hours Worked, April 1940 and April 1941*

Hours worked during census week	Total		Five largest cities		Other urban counties		Rural counties	
	April 1940	April 1941	April 1940	April 1941	April 1940	April 1941	April 1940	April 1941
None[1]	3.9	1.2	3.4	2.0	3.7	1.1	4.6	1.0
1–29 hours	11.8	7.8	9.8	7.3	10.4	7.0	14.6	9.1
30–39 hours	11.5	8.4	12.9	9.8	11.4	9.1	10.9	6.9
40–49 hours	46.9	52.4	55.8	62.6	54.1	60.3	32.2	36.1
50–59 hours	10.5	10.4	7.5	8.1	8.3	8.8	15.2	13.7
60 and over	15.4	19.8	10.6	10.2	12.1	13.7	22.5	33.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average[2]	43.3	46.4	42.8	43.2	42.9	45.2	45.0	51.5

[1] Includes persons who had a job but did not work during the census week because of vacation, temporary illness, bad weather conditions, or temporary lay-off with definite instructions to return to work by a specific date. Also includes farmers who did no work during the census week.

[2] Mean computed from distribution of single hours, for persons working 1 or more hours only.

WORK SPREADING IN BELGIUM

A BELGIAN decree issued jointly by the secretaries-general of the Ministry of Labor, the Ministry of the Interior, the Ministry of Economic Affairs, and the Ministry of Finance on May 7, 1941, provided for reducing working hours in order to give employment to a larger number of workers.[1] The plan which was to be put in effect first in the textile, dress, and diamond industries, provided that an employer could reduce working hours for the purpose of spreading employment if approval was secured from the National Labor Office (*Office National du Travail*). The Office will pay special allowances to the part-time workers, providing the working time does not exceed 75 percent of normal and earnings do not exceed 700 francs a fortnight. These special allowances amount to 10 francs a day for a worker with an additional 4.25 francs for his wife or each other dependent person in the household over the age of 15, while an allowance of 2.50 francs is paid for each child under 15 years of age. A rent allowance of 2.50 or 3.50 francs, depending on the size of the family, may also be granted.

[1] Data are from report by William H. Beach, American consul at Antwerp.

The plan was designed especially to provide enough employment so that workers may retain their skills. Only in extreme cases will an employer be allowed to dismiss a skilled workman, and in any event the National Labor Office will do its utmost to provide such a worker with a job suited to his physique and ability.

LABOR PROBLEMS IN BRITISH AIRCRAFT INDUSTRY [1]

RECOMMENDATIONS made by the British Select Committee on National Expenditure, after study of the aircraft industry, include provision for adoption of a record system for all Government aircraft contractors, showing the extent of idle labor in their plants, publicity to give women a better idea of the kind of factory work for which they are needed, observance of district Federation wage rates with bonus percentages kept in line as between firms, and discontinuance of Sunday labor except for maintenance and repair of plant and other essential work.

Several months were spent in studying the conditions and problems of labor in factories engaged in aircraft production and evidence was taken from aero-engine manufacturers as well as from the airframe and equipment branches of the industry. Plants in all parts of the country were investigated and the Minister of Labor and private individuals were interviewed.

Findings of Committee

It was found that some firms were short of labor. Although most employers denied that there was appreciable waiting time in their plants, some of them did not keep a record of its extent. The subcommittee making the survey secured definite knowledge of one firm that was not fully employing its workers, and was informed of others. There was no indication of a surplus in the aero-engine branch of the industry, but the Ministry of Labor was concerned late in 1940 because of rumors that labor was not being fully employed in the manufacture of airframes. Since the engineering industry as a whole can absorb more labor than is available, an investigation was launched to ascertain if the aircraft industry had a surplus. The fact that labor shortages exist in engineering makes it vital that the existing force should be distributed to the best advantage. Should study show that there is a surplus of workers in aircraft production the Select Committee feels that it would be indefensible to retain them. If, however, it is shown

[1] Great Britain. Parliament. House of Commons. Select Committee on National Expenditure. Fifteenth Report, Session 1940-1941. London, 1941.

that labor is badly distributed it will be the duty of the Ministry of Aircraft Production to secure a rapid transfer of labor between the various firms. It was also recommended that the Ministry of Aircraft Production require all firms working for it to institute some system for recording the extent of idle labor.

Greater use of female labor is urged. For example, some light work habitually performed by laborers, such as sweeping, can be done by women. Thus far the response of women to the appeals for labor has been poor. The Ministry of Labor has used persuasion rather than compulsion to recruit women. Publicity to acquaint women with the needs, as well as an extension of the practice of showing actual plant operations in large centers, is urged.

As between different branches of the aircraft industry the proportion of skilled, semiskilled, and unskilled labor varies widely. With dilution and upgrading in operation it is difficult to draw conclusions as to the distribution by skill classes, and direct comparisons between plants have little value. Although doubt is expressed whether all skilled labor is properly employed, it seems clear that there is no unemployed trained labor in the engineering industry and therefore training of new workers should be considered. For aircraft production most of the training is carried on in factories, but considerable use is made of the Government Training Centers. In spite of criticism of Government training as being too slow and elaborate for the needs of aircraft firms, the majority of witnesses appearing before the subcommittee of the Select Committee reported satisfaction with the type of trainee obtained from the centers and with the cooperation between centers and employers.

A tendency to cite isolated cases of high wages as typical is noted and the report under review calls attention to certain cases where earnings were found to be high. No objection is raised to high pay as such. Men are working long hours, averaging 60 a week or more in most cases. Firms paying high wages obtain a better rate of production when workers are skilled and energetic. The effects are harmful, however, when employers deliberately pay their operatives more than the agreed district rates and disturb other firms in the district. Reference is not made to small "merit" payments but to a general practice of overpayment throughout a factory.

The drift of labor from job to job in wartime, with the hope of temporary financial benefit, is intolerable, the report states. Absenteeism falls in the same category. Under the essential-work order for the engineering industry these problems were considered.[2] Relatively high earnings, however, in the opinion of the subcommittee will inevitably result in some absenteeism, as workers can afford to lose an occasional day's work. The situation is also complicated by observ-

[2] See Monthly Labor Review for September 1941 (p. 613).

ance of the 7-day week throughout the aircraft industry. Men cannot work continuously without a break. To meet the need for rest, abandonment of Sunday work as a general operating practice is believed to be desirable by the subcommittee.

COMPULSORY STATE LABOR SERVICE IN NORWAY

THE Norwegian Government, under the control and direction of the German occupational authorities issued a decree on April 15, 1941, introducing in Norway a system of compulsory State labor service similar to that practiced in Germany.[1]

The purpose of the labor service is to train young workers in "discipline and solidarity and a respect for manual labor."

Under the decree all young male citizens of Norway who have reached 20 years of age are in general subject to compulsory State labor service. Certain exceptions are made, however, as for instance, persons suffering from ill health.

Any young worker liable to compulsory labor service, who is sentenced to jail for more than 10 days for breach of discipline and who has served the sentence or has been punished otherwise during the time of his service, is to be required to render additional compulsory service corresponding to the number of days he has lost on account of his punishment.

The administration machinery of the compulsory labor service is based upon the leadership (*"fuehrer"*) principle. A chief of labor service, appointed by the Government, is in direct command. He decides the projects to be carried out and issues instructions and regulations for this purpose. Over him is the chief of the Department of Labor Service and Athletics, who has final authority and decides how many young workers are to be pressed into service each year and how long beyond 90 days the service period is to last. Young workers who have received a "good education" may be required to serve longer than the fixed period but not more than twice the usual length of time.

Administrative officials and employees are prohibited from holding or accepting any remunerative office outside the labor service.

Cases of violation of the decrees, regulations, and instructions issued by the chief of the labor service or by the chief of the Department of Labor Service and Athletics, are subject to disciplinary and penal measures.

[1] Data are from report of A. R. Preston, United States consul, Oslo, containing quotation from Norsk Lovtidend, April 28, 1941.

Social Insurance

ADEQUACY OF STATE UNEMPLOYMENT BENEFITS

WHEN the State unemployment-compensation laws were enacted, after the passage of the Federal Social Security Act, there was a lack of data on which to base the computation of the cost of an adequate benefit scale. Because it was imperative to insure the solvency of State compensation funds, the benefit provisions (particularly the duration clauses of State unemployment-compensation acts), were deliberately fixed in most States at a restrictive level. The Social Security Board has published data regularly on the size-of-benefit payments, but corresponding information on the duration of benefits has not heretofore been available. In order to appraise the adequacy of benefit payments, not only was it necessary to have unbroken experience but the period of time had to be long enough to provide an adequate basis for examination of the benefit formula in terms of duration of benefits. Such data are now becoming available in different States and the Board has published studies of a number of individual States and one study giving a summary of the findings in 11 States.[1]

The unemployment-compensation laws came into operation in the various States at different times, but by the middle of 1939 all States were paying benefits. The experience of the past 2 years shows that the unemployment funds of most States are solvent; and that, with only a few exceptions, these funds have increased their reserves since payments began. These reserves, it is now evident, have been accumulated in some States at the expense of benefit adequacy. Not only have the weekly benefits been small, the report states, but the period for which those benefits have been received has been short when account is taken of the total amount of unemployment experienced by some workers.

The States covered by the report under review are Idaho, Iowa, Kentucky, Michigan, Minnesota, New Hampshire, North Carolina, Ohio, Oklahoma, Pennsylvania, and West Virginia. Two States—North Carolina and West Virginia—which provided uniform duration of 14 and 16 weeks had a markedly lower proportion of claimants who exhausted their benefit rights than did those States in which

[1] United States Social Security Board. Bureau of Employment Security. Duration of Benefit Payments (Series of 1941—No. 1); Duration of Benefit Payments in New Hampshire (No. 3), in Minnesota (No. 6), in Oklahoma (No. 5), in Utah (No. 4), and in West Virginia (No. 2).

duration was variable, showing that the States with provisions for variable duration did not provide benefits during as many weeks of claimants' unemployment as did the States with uniform-duration provisions. The Ohio law provides for a uniform duration of 16 weeks, but the disqualification provisions are such that many claimants are entitled to only 13 weeks of benefit.

It was found that a larger proportion of claimants with low weekly benefits tended to exhaust their rights than did those receiving higher weekly benefits. With the exception of the three States with uniform-duration provisions, the exhaustion rate for claimants with minimum weekly benefits was seldom less than 70 percent in the States for which these data were available. Only one State—Oklahoma—had as high an exhaustion rate for claimants receiving the highest weekly benefit amount.

The average potential duration of benefits (that is, the amount to which the claimant is entitled on the basis of his prior earnings) in the States having variable duration ranged from 8.6 weeks in Oklahoma to 15 weeks in Michigan. The potential duration of benefits for claimants entitled to $8 per week in Oklahoma barely approximated 7 weeks; thus, the 23 percent of claimants entitled to this amount could have drawn at most only $56 in their benefit years. Reemployment during a period of favorable employment conditions narrows the range of actual average duration of benefits in the different States as compared with the variations in claimants' potential rights.

Exhaustion of Benefits

The data available on the gap between the date of exhaustion of benefits and the end of the benefit year are fragmentary, but the available information indicated that this period during which any unemployment remained uncompensated is apparently large for many claimants.

Of all Michigan claimants, about one-third had at least 6 unprotected months after exhaustion occurred. In New Hampshire, one-third of all the claimants studied were without the protection offered by unemployment compensation for intervals ranging from 6 to 10 months. Of all claimants in Minnesota whose benefit years began during the period January–March 1939, about two-fifths had utilized all their rights within the fourth month after their benefit years began. About 15,000 claimants were thus faced with 8 or more months in which they could draw no benefits. More than one-fourth of the 51,799 West Virginia claimants whose uniform-benefit years began on April 1, 1939, exhausted all benefit rights at least 3 months before the benefit year ended. This gap between exhaustion and the end of the benefit year existed in that State in spite of provisions for uniform duration of 14 weeks.

The existence of such gaps of varying length between the date of exhaustion and the end of the benefit year for a large proportion of claimants both in States where the duration provisions were relatively liberal, as in West Virginia and Michigan, as well as in States where duration provisions were stringent, as in

Minnesota, is significant. Although data are available from relatively few States, the benefit formulas in these States are sufficiently varied and representative to indicate that under each of the unemployment-compensation laws, many claimants have been faced with several months during which they could not draw benefits for any weeks of unemployment.

The gap between the date when benefits are exhausted and the beginning of a new benefit year would not have serious implications for the adequacy of the unemployment-compensation laws, if claimants secured employment shortly after exhausting their benefit rights. However, in most of the States covered in the study, it was found that many of those exhausting their benefit rights experienced further unemployment. In Michigan, for example, while about one-third of those exhausting their benefit rights were reemployed within the same calendar quarter, a similar proportion had not been reemployed at all by the quarter following the end of the benefit year. Special studies in four of the States show that in New Hampshire, of 25,813 claimants having potential benefit rights ranging from 4 to 16 weeks, the estimated total number of weeks of uncompensated unemployment was 51,973. In Oklahoma with potential benefit weeks ranging from 2 to 16 weeks, 37,243 claimants had an estimated total of 199,349 weeks of uncompensated unemployment, while in Minnesota 34,548 claimants with potential benefit weeks ranging up to 16 weeks had an estimated total of 109,627 weeks with no unemployment compensation, and in Utah with potential benefit weeks ranging from 8 to 16 weeks a total of 15,318 claimants had a total of 20,038 weeks of uncompensated unemployment.

UNEMPLOYMENT-COMPENSATION OPERATIONS, JULY 1941 [1]

THE amount of unemployment-compensation benefits paid out during July declined slightly below the previous month, but the number of continued claims received increased for the first time since April. An 11-percent increase in waiting-period claims indicated that the hitherto growing gap between benefit claims and payments in 1941 as compared with those in the corresponding months of 1940 might be reversed in August. The initiation of new benefit years by claimants in many States, separations in various fields of seasonal employment, and an increasing volume of lay-offs in nondefense industries because of lack of materials and equipment were responsible for the gain.

Benefit payments in July compensated workers for more than 2,700,000 weeks of unemployment. As in the past 5 months, approximately 92 percent of all weeks compensated were for total unem-

[1] Prepared by Research and Statistics Division, Bureau of Employment Security, Social Security Board.

ployment. More than 752,500 workers received at least 1 or more benefit checks during the month, compared with more than 1,400,000 in July 1940. The number of claims, payments, and weeks compensated this July were approximately 50 percent below the figures for the same month of 1940.

Benefits in July were paid to an average weekly total of 611,100 workers, or 609,000 fewer than for July 1940. This average represented a decrease of more than 10 percent from June. Most States shared in the decline, with Arkansas and Hawaii reporting the greatest reductions (60 percent). There were increases over June, however, in eight States; the sharpest advance (31 percent) occurred in Florida.

The 4-percent decrease to $29,300,000 in benefit payments brought total disbursements for 1941 to $226,000,000, one-third below the level of the first 7 months of 1940. Sixteen jurisdictions, including the major industrial States of Connecticut, Indiana, and Michigan, did not share in the decline from June to July of this year. Only in the District of Columbia did 1941 payments exceed benefits paid out during the comparable period of 1940.

Although for the country as a whole virtually as many continued claims (3,600,000) were received in July as in June, sharp increases or decreases were reported for most States. Increases ranging from less than 1 percent to 74 percent occurred in 20 States, and in 1 other State (Michigan) where large lay-offs were made by automobile plants, receipts more than doubled; the declines ranged from 3 to 58 percent. Continued claims averaged 797,400 weekly, 5 percent below the preceding month and the lowest monthly average on record. The number of persons filing claims increased to 914,000 in the second week ended within the month and then dropped off to 785,900 in the last week of the month.

Continued ***Unemployment-Compensation Claims Received, Weeks Compensated, and Benefits Paid, by State, July 1941***

[Data reported by State agencies, corrected to Aug. 23, 1941]

Social Security Board region and State	Continued claims [1]			Weeks compensated			
	Number	Type		Number	Type of unemployment		
		Waiting period	Compensable		Total	Partial and part-total combined [2]	Partial only [2]
Total	3,623,409	770,861	2,852,548	2,744,966	2,533,254	211,712	
Region I:							
Connecticut	25,127	9,031	16,096	14,245	12,885	1,360	1,345
Maine	16,400	2,021	14,379	15,069	12,845	2,224	1,349
Massachusetts	206,061	34,827	171,234	177,949	171,237	6,712	5,999
New Hampshire	10,210	1,492	8,718	9,199	8,072	1,127	1,044
Rhode Island	37,256	3,873	33,383	33,383	29,159	4,224	(3)
Vermont	2,456	554	1,902	1,911	1,719	192	139
Region II:							
New York	891,775	172,880	718,895	734,420	734,420	(3)	(3)
Region III:							
Delaware	4,010	508	3,502	3,431	2,583	848	781
New Jersey	147,938	32,038	115,900	103,267	88,787	14,480	(3)
Pennsylvania	256,861	89,067	167,794	140,569	140,569	(3)	(3)
Region IV:							
Dist. of Columbia	15,358	2,314	13,044	12,008	11,396	612	58
Maryland	56,763	4,712	52,051	49,393	43,865	5,528	5,223
North Carolina	68,602	13,746	54,856	49,768	47,631	2,137	1,764
Virginia	50,619	5,044	45,575	44,964	43,240	1,724	640
West Virginia	42,791	2,871	39,920	38,745	32,511	6,234	6,080
Region V:							
Kentucky	21,192	2,204	18,988	37,976	33,926	4,050	1,958
Michigan	146,493	52,455	94,038	77,743	75,510	2,233	2,075
Ohio	117,732	36,731	81,001	78,124	68,309	9,815	(3)
Region VI:							
Illinois	262,626	29,059	233,567	233,000	185,302	47,698	29,711
Indiana	45,894	14,546	31,348	31,290	26,884	4,406	(3)
Wisconsin	33,133	13,755	19,378	17,269	16,320	949	309
Region VII:							
Alabama	51,913	13,203	38,710	38,243	35,728	2,515	435
Florida	90,710	26,289	64,421	57,872	51,983	5,889	(3)
Georgia	49,868	15,746	34,122	34,115	32,718	1,397	752
Mississippi	22,430	3,926	18,504	18,365	16,973	1,392	935
South Carolina	27,809	6,067	21,742	18,291	16,176	2,115	591
Tennessee	67,633	11,094	56,539	48,284	46,803	1,481	304
Region VIII:							
Iowa	23,760	6,748	17,012	16,919	13,990	2,929	962
Minnesota	38,940	6,060	32,880	32,079	28,345	3,734	2,512
Nebraska	8,029	1,566	6,463	6,281	5,687	594	264
North Dakota	3,057	437	2,620	2,538	2,169	369	220
South Dakota	3,970	439	3,531	3,504	3,188	316	(3)
Region IX:							
Arkansas	28,032	10,587	17,445	17,445	16,776	669	33
Kansas	17,127	3,699	13,428	13,089	11,816	1,273	628
Missouri	63,854	19,243	44,611	35,020	30,897	4,123	3,584
Oklahoma	23,604	4,837	18,767	17,957	15,863	2,094	117
Region X:							
Louisiana	100,815	34,069	66,746	60,348	56,906	3,442	(3)
New Mexico	7,178	898	6,280	5,487	5,110	377	146
Texas	103,011	15,711	87,300	60,270	52,061	8,209	265
Region XI:							
Arizona	8,303	1,517	6,786	6,500	6,155	345	1
Colorado	18,722	2,367	16,355	16,305	13,864	2,441	1,734
Idaho	7,183	1,902	5,281	4,383	4,088	295	38
Montana	14,737	2,255	12,482	11,464	11,464	(3)	(3)
Utah	9,005	3,459	5,546	5,489	5,020	469	178
Wyoming	2,985	722	2,263	2,432	1,757	675	502
Region XII:							
California	316,144	43,503	272,641	267,183	226,477	40,706	25,511
Nevada	3,956	513	3,443	3,090	2,745	345	73
Oregon	18,329	2,551	15,778	14,388	11,695	2,693	1,884
Washington	30,206	7,151	23,055	21,727	17,555	4,172	2,233
Territories:							
Alaska	1,890	455	1,435	1,417	1,384	33	0
Hawaii	912	119	793	758	691	67	60

***Continued Unemployment-Compensation Claims Received, Weeks Compensated, and Benefits Paid, by State, July 1941*—Continued.**

Social Security Board region and State	Benefits paid				Month and year benefits first payable	Amount of benefits since first payable [4]
	Amount [3]	Type of unemployment				
		Total	Partial and part-total combined [2]	Partial only [2]		
Total	$29,293,121	$27,733,756	$1,533,155			$1,569,212,261
Region I:						
Connecticut	144,101	134,097	6,746	$9,653	January 1938	24,078,461
Maine	108,459	93,987	14,472	9,128	do	12,074,239
Massachusetts	1,766,664	1,728,810	35,412	30,593	do	89,443,451
New Hampshire	70,429	64,922	5,507	4,989	do	7,298,897
Rhode Island	326,193	304,270	21,923	(5)	do	25,253,039
Vermont	15,309	14,308	973	629	do	2,691,260
Region II:						
New York	8,418,439	8,418,439	(2)	(2)	do	312,670,667
Region III:						
Delaware	29,902	24,738	5,087	4,653	January 1939	1,917,773
New Jersey	1,164,533	1,067,344	96,226	(5)	do	38,838,594
Pennsylvania	1,501,379	1,501,379	(2)	(2)	January 1938	187,449,152
Region IV:						
Dist. of Columbia	148,331	140,867	6,838	642	do	6,671,108
Maryland	544,730	505,289	39,355	36,831	do	25,565,949
North Carolina	317,784	309,728	7,946	5,899	do	19,082,765
Virginia	353,300	342,989	10,258	3,317	do	18,029,523
West Virginia	372,057	320,550	51,507	50,595	do	22,338,136
Region V:						
Kentucky	265,033	246,995	17,596	8,430	January 1939	11,387,231
Michigan	969,636	952,141	17,495	16,069	July 1938	110,738,390
Ohio	695,215	646,043	45,774	(5)	January 1939	56,632,760
Region VI:						
Illinois	2,771,389	2,378,610	386,676	225,562	July 1939	78,803,018
Indiana	338,989	313,437	25,476	(5)	April 1938	39,011,767
Wisconsin	205,329	198,183	7,146	1,960	July 1936	21,217,269
Region VII:						
Alabama	269,104	255,213	13,655	2,043	January 1938	19,149,283
Florida	579,362	537,336	42,026	(5)	January 1939	12,484,298
Georgia	247,864	240,039	7,825	4,649	do	9,335,108
Mississippi	149,748	141,804	7,863	5,020	April 1938	6,122,523
South Carolina	128,044	117,519	10,444	2,614	July 1938	6,113,449
Tennessee	395,003	385,903	9,100	1,731	January 1938	19,628,878
Region VIII:						
Iowa	146,674	129,409	17,036	5,068	July 1938	13,815,372
Minnesota	310,899	281,799	29,100	19,866	January 1938	30,929,400
Nebraska	54,350	50,213	4,137	1,529	January 1939	4,144,071
North Dakota	23,139	20,328	2,811	1,577	do	1,599,832
South Dakota	24,974	23,231	1,708	(5)	do	1,024,814
Region IX:						
Arkansas	129,706	126,459	3,195	153	do	6,321,694
Kansas	122,123	113,921	8,202	3,693	do	5,412,453
Missouri	296,393	276,404	19,985	16,365	do	15,590,188
Oklahoma	171,531	156,310	15,221	791	December 1938	9,746,168
Region X:						
Louisiana	564,757	539,847	24,456	(5)	January 1938	20,513,135
New Mexico	47,545	44,694	2,836	967	December 1938	3,023,383
Texas	455,955	416,013	38,848	1,094	January 1938	33,753,978
Region XI:						
Arizona	71,002	68,088	2,914	5	do	5,256,162
Colorado	164,997	146,389	18,550	12,518	January 1939	9,369,142
Idaho	41,110	38,857	2,253	326	September 1938	5,843,041
Montana	124,745	124,745	(2)	(2)	July 1939	6,047,386
Utah	69,108	65,187	3,921	1,306	January 1938	6,579,734
Wyoming	28,490	22,442	6,048	4,278	January 1939	2,914,229
Region XII:						
California	3,653,778	3,273,927	370,854	214,976	January 1938	163,147,218
Nevada	39,924	36,347	3,577	649	January 1939	2,586,990
Oregon	171,602	149,123	22,267	14,856	January 1938	15,981,871
Washington	257,218	218,982	38,236	20,907	January 1939	19,807,070
Territories:						
Alaska	19,768	19,419	349	0	do	1,108,020
Hawaii	7,007	6,682	325	269	do	669,922

[1] I. e. certification that the claimant has completed a waiting-period week or a compensable period.
[2] Benefits for partial and part-total unemployment are not provided by State law in Montana, New York, and Pennsylvania.
[3] Includes supplemental payments, not classified by type of unemployment.
[4] Adjusted to exclude returned and voided benefit checks except for July 1941.
[5] Data for partial unemployment included with data for part-total unemployment.

OPERATIONS OF FEDERAL EMPLOYEES' RETIREMENT SYSTEM, 1940

DURING the fiscal year 1939–40 there were 62,027 annuitants on the roll of the Federal civil-service retirement fund, according to the annual report of the Retirement Division of the United States Civil Service Commission.[1] Altogether, 7,267 were added to the roll during the year, and 3,625 were dropped. The number of annuitants retired was the largest in any year since 1934, when 14,477 were retired, the large number retired in that year being due to the passage of the act of June 16, 1933, providing for annuities by reason of involuntary separation without delinquency or misconduct, regardless of age, after 30 years' service. The number of annuitants dropped from the roll in the fiscal year ended June 30, 1940—3,625—was the largest in any year since the beginning of the operation of the system in 1921. Of this number 3,506 were dropped because of death, while the remainder were removed from the register because of recovery from their disabilities, because of reemployment, or because of death before final approval of their claims.

The 7,267 annuitants added to the roll in 1939–40, were retired for the following causes: Age, 4,244; disability, 2,227; voluntary separation after 30 years' service (within 2 years of statutory retirement age), 707; and involuntary separation after attainment of at least age 55, with not less than 15 years' service, 89.

Males predominated among the annuitants, forming about 84 percent of the total number. About 40 percent of the female annuitants were retired for disability, while only approximately 29 percent of the male annuitants had been retired for this cause.

The average annuity paid to those on the roll June 30, 1940, was $965, as compared with $978 in 1939. The number receiving $1,200 or more per annum was 22,926, or 37.0 percent of the total, as compared with 21,114 or 36.2 percent, on June 30, 1939. The annual value of the retirement roll as of June 30, 1940, was $59,878,629 as compared with $57,074,290 for 1939.

The total receipts of the civil-service retirement and disability fund during the year amounted to $151,681,589; of this, employees' contributions and service credits amounted to $42,944,829, interest on investments to $21,565,000, and appropriations by Congress to $87,171,760 (which included an allotment of $842,760 for the District of Columbia). The disbursements during the year amounted to $67,315,476, of which $59,252,241 was paid for annuities and the remainder for refunds and interest. The balance in the fund on June 30, 1940, was $553,121,522.

[1] U. S. Civil Service Commission. Retirement Division. Retirement Report. Fiscal Year Ended June 30, 1940. Washington, 1941.

During the past year a new mortality table has been constructed, based on the actual mortality experience of male and female annuitants retired on account of age or service. This table was made effective February 1, 1940, for use in computing annuities at retirement on account of age and service. Studies are in progress with respect to the mortality gradation of annuitants retired on account of disability.

A medical report showing the causes of disability, by number of cases and percent of total, among disability annuitants added to the roll, and the causes of death of annuitants dropped from the disability roll, is published for the first time in the 1940 Retirement Report.

The following table shows the causes of disability among the 2,227 cases added to the roll during 1940 on account of disability, and the causes of death among 1,146 annuitants dropped from the roll during the year.

Causes of Disability and Death Among Disabled Civil Service Annuitants in 1940

Classification	Disability cases		Classification	Death cases	
	Number	Percent		Number	Percent
Heart	1,055	47.4	Heart	606	52.8
Nervous system	386	17.3	Lungs	136	11.9
Bones, joints, and muscles	213	9.6	Digestive system	102	8.9
Lungs	188	8.4	Causes unknown	94	8.2
Digestive system	111	5.0	Genito-urinary system	90	7.8
Eyes	95	4.3	Nervous system	48	4.2
Genito-urinary system	45	2.0	Miscellaneous groups	22	1.9
Metabolism	32	1.4	Thyroid	20	1.7
Thyroid	29	1.3	Bones, joints, and muscles	10	.9
Hernia	22	1.0	Metabolism	9	.8
Varicose veins	19	.8	Throat	3	.3
Ears	13	.6	Mouth	3	.3
Miscellaneous groups	10	.4	Eyes	2	.2
Feet	8	.4	Hernia	1	.1
Mouth	1	.1			
Total	2,227	100.0	Total	1,146	100.0

AMENDMENT OF BRITISH SOCIAL-INSURANCE LAWS

THE British health insurance, contributory pensions, and workmen's compensation laws were amended by the National Health Insurance, Contributory Pensions and Workmen's Compensation Act, 1941, passed July 22.[1] The main purposes of the bill, which was passed without amendment, were to increase the weekly rates of sickness and disablement benefits under the National Health Insurance Acts and to bring a larger number of nonmanual workers under the health and pension systems and the Workmen's Compensation Act, by raising to £420 the earnings limit of workers included under these laws.

[1] Data are from Great Britain, Parliament, 4 & 5 Geo. 6, National Health Insurance, Contributory Pensions, and Workmen's Compensation Bill, London, 1941; and Debates, July 15 and 22, 1941, Vol. 373, Nos. 84 and 87, London, 1941.

Under the National Health Insurance Acts the weekly rates of sickness and disablement benefits are increased by 3s., and will come into effect on January 5, 1942. The existing and new rates of benefit are as shown in the following table.

Weekly Sickness and Disablement Benefit Rates in Great Britain, by Sex and Marital Status

Insured	Sickness benefit		Disablement benefit	
	Existing rate	New rate	Existing rate	New rate
	s. d.	*s. d.*	*s. d.*	*s. d.*
Men	15 0	18 0	7 6	10 6
Spinsters and widows	12 0	15 0	6 0	9 0
Married women	10 0	13 0	5 0	8 0

These rates are effective with regard to sickness benefit, providing 104 weeks have elapsed since the entry of an insured person into insurance and 104 contributions have been paid by or in respect of that person; otherwise the rate of sickness benefit to which that person is entitled is, in the case of a man, 12s. a week, and in the case of a woman, 10s. 6d. a week.

The amount by which any sickness and disablement benefit is to be reduced, throughout a period during which a pension is payable for disablement in the highest degree as a result of the late war, is increased from 7s. 6d. to 10s. 6d. a week.

In computing the resources of any person for the purpose of determining the needs of an applicant for an allowance under the Unemployment Assistance Act, a supplementary pension under the Old Age and Widow's Pensions Act, an allowance under the Blind Persons Acts, or the granting of outdoor relief under the Poor Law Acts, the first 10s. 6d. of benefit under the insurance act is disregarded.

The rate of contributions under the National Health Insurance Act is increased by 2d. a week, or to 11d. in the case of men and to 10½d. in the case of women. Of these amounts, 5½d. a week is paid by the employer. In the case of employed contributors aged 18 or over, whose remuneration does not include the provision of board and lodging by the employer and who do not receive more than 4s. per day, the employer pays the entire contribution if the pay is 3s. or less a day; if it is more than 3s. and does not exceed 4s., the employer pays 6½d. a week, male employees 4½d. and female employees 4d. per week.

The maximum rate of contributions for casual or intermittent employment is increased from 8d. to 10d. for employers, from 4½d. to 5½d. for male employees, and from 4d. to 5d. for female employees.

Adjustment is also made of the amounts to be credited, out of moneys provided by Parliament, to the account of men in the armed forces who are members of approved societies, and to the Navy, Army and Air Force Insurance Fund, for men who are not members of ap-

proved societies. The rates of contribution of constables of the metropolitan police and those of persons engaged in certain war occupations are increased by 1d.

The Exchequer will provide the usual proportion of the cost of these increased benefits, namely one-seventh in the case of men and one-fifth in the case of women. It is estimated that at the present time the additional cost to the Exchequer will be about £1,300,000 a year.

The maximum yearly rate of the sum applied for the purpose of meeting the cost of medical benefit, the administration expenses of insurance committees, and expenses incurred by the Minister, will be 14s. 6d. (instead of 13s.) per year for each of the total number of persons entitled to medical benefit through membership in an approved society. This provision becomes effective January 1, 1942.

The remuneration limit for the compulsory insurance of nonmanual workers under the health-insurance and pension systems is raised from £250 to £420, effective at the beginning of the next benefit year, January 5, 1942. Effective January 1, 1942, the law will bring within the scope of the Workmen's Compensation Act nonmanual workers who are remunerated at a yearly rate between £350 (the present limit) and £420.

COMPULSORY SOCIAL INSURANCE IN PERU [1]

THE compulsory insurance scheme providing benefits for sickness, maternity, invalidity, old age, and death, established by law in Peru in 1936, is now regulated by a decree of February 18, 1941, replacing former partial regulations.[2] The scheme is administered by the National Social Insurance Fund (*Caja Nacional de Seguro Social*).

Coverage of System

Compulsory insurance applies to all persons from 14 to 60 years of age who habitually work, under labor agreement, for an employer, and whose annual wage does not exceed 3,000 gold soles. Farm workers, home workers, and apprentices are included; self-employed persons (whose annual income does not exceed 3,000 gold soles), and domestic servants may come under the scheme voluntarily. The law specifically excludes (1) commercial employees, for whom a special insurance scheme is to be prescribed; (2) employees of the State, municipalities, public and charitable institutions, and companies

[1] Sources: Informaciones Sociales (Lima) July 1937, February 1941, and May 1941; International Labor Office, Geneva, Legislative Series, 1936–Peru 2 and 1937–Peru 1; Compulsory Social Security in Peru, by Edgardo Rebagliati (in Bulletin of Pan American Union, Washington, November 1937).

[2] The legislative basis of this insurance scheme consists of law No. 8433 of August 12, 1936, as amended and extended by law No. 8509 of February 23, 1937, and decrees of August 12 and November 14 and 30, 1936, and regulated by a decree of February 18, 1941. For an account of the legislation as enacted through November 30, 1936, see Monthly Labor Review, March 1937 (pp. 559–563).

under Government supervision, who already enjoy pension, retirement and survivors' benefits; (3) persons affiliated with a private insurance group already organized; (4) family workers; (5) persons disabled by industrial accidents or occupational diseases, who draw life pensions; and (6) casual workers employed for fewer than 90 days per year.

Independent workers eligible for voluntary insurance include persons who personally engage in work and do not employ more than 2 hired assistants and persons who are hired by an independent worker. Persons who cease to be subject to compulsory insurance, and others under 40 years of age, who live by their work and earn less than 3,000 gold soles per year, may voluntarily come under the insurance system by furnishing specified proof of health.

Persons compulsorily insured may, by paying an additional contribution, voluntarily contract with the National Social Insurance Fund for medical and pharmaceutical service for a spouse not compulsorily insured and for dependent children under 14 years of age. The medical care includes both general and special medical attention at home or at office of consultation, and obstetrical care for the wife of the insured person. Family insurance does not require previous medical examination of the beneficiaries; it does not include hospitalization, but persons covered by it may receive such service in the institutions of the Fund at cost.

A dismissed or involuntarily unemployed member shall be retained on the list for 6 months, and registration shall then be canceled at his own request. Cancelation of registration, however, does not immediately invalidate benefits already earned, but the member shall continue to be entitled to these benefits for a third of the time of his entire membership.

Financial Resources

The insurance system is to be financed by: (1) Contributions from the insured persons, their employers, and the State; (2) 1 percent of all payments of 1 gold sol or more made by the State, municipal councils, Government-supervised companies, and entities dependent on the State or created by it, except those for the services of the foreign and domestic debt, State and municipal aid to public welfare institutions, contributions for the support of free education, wage and pension payments, and various other like payments; (3) fines for violation of the social-insurance law or any other social legislation; (4) surtax of 2 percent on tobacco and on the consumption of alcohol and alcoholic beverages; and (5) interest, legacies, gifts, and survivors' benefits unclaimed after 3 years.

The percentages of wages to be paid in contributions for the various types of social insurance, on the basis of average weekly remuneration in cash and in kind, are shown in table 1.

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TABLE 1.—*Percent of Wages Contributed by Workers, Employers, and State in Peru*

Type of insurance	Total	Percent of wages contributed by—		
		Worker	Employer	State
Compulsory insurance	6.0	1.5	3.5	1.0
Family insurance (voluntary for persons compulsorily insured)	2.0	2.0	.....	.....
Voluntary insurance:				
Independent workers and all others except domestic servants:				
Sickness and maternity only	2.5	1.5	.....	1.0
All social insurance risks	6.0	3.5	.....	2.5
Domestic servants, all risks	6.0	1.5	3.5	1.0

Temporarily, until the medical services necessary for the furnishing of benefits for sickness and maternity are established in the various zones, workers' contributions are not to be collected, and employers' contributions are to be only 2 percent, but that of the State is to be 1 percent, as at other times. With the establishment of such services in the hospitals opened in Lima and Ica in 1941, collection of workers' contributions has begun in the regions served, and the contribution of the employers has been raised to their full quota of 3.5 percent. It is expected that these changes will be made in other regions within the current year.

Family insurance is offered only to compulsorily insured persons. When workers covered by the compulsory insurance have paid their weekly contributions for at least 150 consecutive weeks and continue to be thus insured, the family insurance contribution is reduced to 1 percent.

The contributions of persons paid only in kind shall be paid by their employers, beginning from the time when the National Social Insurance Fund fixes the value of such payments; but until such time the worker, employer, and State contributions shall be based upon only the cash payment, specified credit for payment in kind, however, being allowed for domestic servants voluntarily insured. The entire contribution for an apprentice shall be paid by the employer, for himself and the apprentice; the State contribution in this case, as in all others in which the average weekly pay is 6 gold soles or less, shall be 2.5 percent of the average weekly pay. Voluntarily insured persons, other than domestic servants, pay their contributions on the basis of the sixth remuneration group (from 18.01 to 24.00 gold soles per week, average 21 gold soles) as a minimum. Persons retired because of invalidity or old age may, by paying a contribution of 1 percent of their pensions, continue to be entitled to medical, hospital, and pharmaceutical benefits. Contributions are to be made by the purchase of stamps issued by the National Social Insurance Fund.

The tax on payments specified above is due from the receiver, not the payer of the money, and fines are specified for failure to pay this tax,

and for failure by employees of the State, the Government-supervised companies, and the municipal councils to require the prescribed stamps upon payments made.

The following statement shows the amount of the weekly contributions of persons compulsorily insured:

TABLE 2.—*Rate of Weekly Contributions From Workers, Employers, and State Under Compulsory Insurance in Peru, by Wage Classes*

Weekly wage class	Amount (gold soles) fixed as basis for contribution	Weekly contribution (gold soles)			State contribution (percent)
		Total	Worker (1.5 percent)	Employer (3.5 percent)	
Class A (less than 1.00 sole)[1]	1.00	0.05	0.01	0.04	2.5
Class B (1.00 to 3.00 soles)[1]	2.00	.10	.03	.07	2.5
Class C (3.00 to 6.00 soles)[1]	5.00	.25	.07	.18	2.5
Class 1 (less than 6.00 soles)[2]	5.00	.18	[3]	.18	2.5
Class 2 (6.00 to 8.00 soles)	7.00	.35	.10	.25	1.0
Class 3 (8.01 to 10.00 soles)	9.00	.45	.13	.32	1.0
Class 4 (10.01 to 14.00 soles)	12.00	.60	.18	.42	1.0
Class 5 (14.01 to 18.00 soles)	16.00	.80	.24	.56	1.0
Class 6 (18.01 to 24.00 soles)	21.00	1.05	.31	.74	1.0
Class 7 (24.01 to 30.00 soles)	27.00	1.35	.40	.95	1.0
Class 8 (30.01 to 38.00 soles)	34.00	1.70	.51	1.19	1.0
Class 9 (38.01 to 46.00 soles)	42.00	2.10	.63	1.47	1.0
Class 10 (46.01 to 57.70 soles)	52.00	2.60	.78	1.82	1.0

[1] Workers occasionally falling below 6 gold soles per week or part-time workers dividing time among 2 or more employers and not receiving as much as 6 soles per week from any 1 employer.
[2] Permanent employees of one employer at a rate less than 1 sole per day or 6 soles per week.
[3] Exempt.

Benefits

The benefits provided in the law are as follows:

Sickness.—In order to receive sick benefits the beneficiary under compulsory insurance must have paid 4 weekly contributions in the 120 days preceding sickness, and under voluntary insurance 20 contributions in 160 days preceding sickness. The benefits, which start from the third day of the illness, may continue for 26 weeks, and in protracted illness and convalescence up to 52 weeks. Medical (including specified limited dental), hospital, and pharmaceutical aid are furnished without charge; and in addition 50 percent of the average daily wage is paid as cash benefit during the first 4 weeks of illness, and 40 percent thereafter. A person with at least 4 weekly contributions to his credit in the 120 days prior to his illness, is entitled to all the benefits in kind provided under sickness insurance, provided the medical services in his particular locality or Province have been available that long.

The fund must furnish the medical benefits specified except in cases where existing institutions were already furnishing and continue to furnish benefits not inferior to those authorized by this legislation. Pharmaceutical aid consists of the drugs, including serums, vaccines, and injections which the physicians prescribe. In family insurance, if 10 weekly contributions have been paid in the 4

months preceding illness, medical and pharmaceutical aid for the dependent wife and for children under 14 years, and obstetrical attention for the wife, are provided without charge; and hospitalization is provided at cost.

Cash benefits shall be paid weekly either to the insured person himself or to someone whom he designates, but shall be suspended for a person who, while receiving them, accepts paid employment, or for a person who refuses to follow physicians' orders; benefits may be paid again when he follows such instructions, but those lost during the time when he refused to follow instructions will not be refunded.

Compensation for industrial accidents and occupational diseases is already provided for by previous legislation; however, in urgent case of accident or occupational disease, the National Social Insurance Fund is required to render medical, hospital, and pharmaceutical aid, and charge it to the employer or person responsible. Moreover, employers and private insuring agencies may contract with the fund for medical, hospital, and pharmaceutical service for persons injured at work or suffering from occupational diseases.

Maternity benefit.—An insured woman, whether covered by compulsory or voluntary insurance, who has paid 4 weekly contributions within the 180 days preceding birth (or the wife of an insured person who has contracted for family insurance, if he has paid 10 weekly contributions in the 4 months preceding childbirth) is entitled to general and special medical assistance, hospitalization, and pharmaceutical benefit, and, if she abstains from paid work during the time, to cash maternity benefit amounting to 50 percent of average weekly wage for 36 days preceding and 36 days after childbirth, and in case of need, ordinary sickness benefits thereafter. Cash benefit equal to 25 percent of the average daily wage shall be granted for 8 months after the birth of a surviving child; for this cash benefit may be substituted milk vouchers when the fund deems it inadvisable or impossible for the mothers to nurse their infants.

At least 4 months before the presumptive date of childbirth, the insured woman shall obtain verification of her condition, and from that time she shall be required to follow directions given her. Cash benefits are suspended if she fails to follow instructions, and also in case of intentional abortion.

Payment of maternity benefits shall not be begun until 180 days after the inauguration of such service in each Province or locality, and the collection of worker contributions has begun.

Invalidity benefit.—When the earning capacity of the worker has been reduced by two-thirds, taking into account the physical and mental abilities of the insured person, his age, sex, and the economic value of his abilities in relation to those of a well person, the fund may, through its medical services, declare a state of invalidity.

If weekly contributions have been paid for 200 weeks, 100 of which were within the 4 years preceding declaration of invalidity, benefits for invalidity are paid, provided the working capacity of the insured has been reduced two-thirds by illness not occupational, or by injury not caused by industrial accident. The benefits start at the termination of sick benefits, and are paid for a provisional period of 5 years. At the end thereof, if a medical examination shows that the incapacity has been reduced 50 percent, the pension is discontinued; otherwise it is made permanent. The pension amounts to 40 percent of the average wage for the last 2 years; this is increased by 2 percent for each additional 100 contributions up to 60 percent, and by 1 percent for an aged or invalid dependent spouse and for each dependent child under 14 years or dependent invalid child, up to 10 percent. A proportionately lower rate of pension shall be granted to persons who have not made the 200 weekly contributions referred to above. The pension may be denied or suspended on refusal to submit to medical examination or to adopt suggested preventive or remedial means.

When invalidity has been declared to exist, the cash sickness benefits are replaced by the invalidity pension, but medical service may be continued if it will contribute to lengthening the life of the insured person or reduce his incapacity to work, or if the injury is not healed.

Old age.—Insured persons who are 60 years of age and have paid 1,040 weekly contributions into the National Social Insurance Fund are entitled to an old-age pension equal to 40 percent of the average wages during the last 5 years. The pension is increased by 2 percent for each additional 100 contributions, up to 60 percent, and by 1 percent for aged or invalid dependent spouse and for each dependent child under 14 years or dependent invalid child, up to 10 percent. If the insured was over 40 years of age when he came under the insurance system, and has paid 260 or more contributions, or if for any other reason cannot complete the 1,040 contributions, he may be paid a reduced pension proportioned to the number of contributions paid. If fewer than 260 contributions have been paid, the amount of his personal contributions, with interest at 5 percent per annum, will be returned. Pensions to aliens and to persons living in a foreign country are based on the contributions of the insured persons and their employers, no contribution being made by the State. When either an invalidity or an old-age pension is granted, the registration of the insured person as an active member of the fund is canceled, and the payment of employer and worker contributions ceases, even if the insured person continues work after 60 years. Invalidity and old-age pensions are mutually exclusive.

Death benefit.—Funeral expenses and a death benefit will be paid to the legal heirs upon the death of an active insured person or pen-

sioner. The grants for funeral expenses vary according to the remuneration class of the insured person, according to a scale given, ranging from 50 gold soles for the lowest wage group to 180 for persons belonging to the highest wage group, based on the last contribution of the insured person. They are paid to the widow and children, beneficiaries, on the day of death, after due proof of identity and relationship. In case there are no relatives, the fund shall pay for the funeral, being thereby cleared from all obligation and claim. The death benefit consists of 33 percent of the average weekly pay the insured person received in the period completed in the year in which the death occurred or of the preceding year if he had not received at least 4 weekly payments in the current year. In the case of insured persons whose death occurs in the year in which their occupational activity begins, the death benefit shall be regulated by the average of weekly wages received. The death benefit shall be paid in equal parts to the surviving spouse and the dependent children under 17 years, with the provision that in the case of the absence of any survivor his share shall be added to that of the others; in the absence of any of the above heirs the death benefit shall be paid to any dependent relatives in the ascending line; if unclaimed for 3 years it shall revert to the National Social Insurance Fund.

Administration of the System

The scheme is to be administered by the National Social Insurance Fund created by this law, and managed by an advisory board composed of the following nine members: the Minister of Public Health, Labor, and Social Welfare (who presides), the Director of Social Welfare, the Director General of Health, two representatives of the insured persons, two representatives of the employers, a physician chosen by the Faculty of Medicine, and the Director General of the Fund. The accounts of the Fund are to be audited periodically by 2 trained accountants appointed by the Executive Authority. Fines are prescribed for violation of the legislation.

By decrees of November 14 and 30, 1936, the date for beginning the payment of employer and State contributions was set as March 1, 1937, and the departments and Provinces in which social insurance was to become effective at once were specified. Until such time as the scheme goes into full effect in any region, employers are to continue their social services and to receive credit for sums expended in continuing medical, hospital, pharmaceutical, and maternity benefits for their workers.

Operations of System

Table 3 shows the receipts by the National Social Insurance Fund from taxes and from employer and worker contributions during the

first quarter of 1941. The payments which the Deposit and Consignment Fund transmits include the collections from Lima and Callao for the current month, and from the other Provinces for the preceding month. The collection of employer contributions at 2 percent, with respect to the Provinces of Lima and Ica, covers those received up to January 31, 1941, from which date the employer contribution is 3.5 percent. In the other regions the employer contribution of 2 percent is still effective.

TABLE 3.—*Receipts of National Social Insurance Fund in Peru, First Quarter of 1941*

Source of income	Total	Lima and Callao	Provinces
	Gold soles [1]	*Gold soles*	*Gold soles*
Total income	1,084,310	830,325	253,985
Tax of 1 percent on payments	148,972	109,748	39,224
Additional tax of 2 percent on alcohol	36,371	13,803	22,568
Additional tax of 2 percent on tobacco	104,937	85,841	19,096
Employer contributions at 2 percent	445,221	279,706	165,515
Employer contributions at 3.5 percent	224,167	238,859	5,308
Worker contributions at 1.5 percent	104,625	102,368	2,275

[1] The Peruvian sol has recently been maintained at about 15.4 cents in United States currency.

The cash benefits paid for sickness, maternity, and death by the National Social Insurance Fund during February, March, and April 1941 are shown in the following table:

TABLE 4.—*Days and Amount of Benefits Under Peruvian Social Insurance, February–April 1941*

Kind of benefit	Total		Inside hospital		Outside hospital	
	Number of days	Benefits paid	Number of days	Benefits paid	Number of days	Benefits paid
		Soles		*Soles*		*Soles*
Maternity and milk	3,556	5,492				
Sickness and convalescence	21,934	33,584	13,985	20,212	7,949	13,372
Death	[1]53	5,810	[1]38	4,170	[1]15	1,640

[1] Cases.

Workers' Hospitals [3]

In the city of Lima on December 8, 1940, was opened the Workers' Hospital, the first and largest of a network of 12 hospitals which the Social Insurance Fund is constructing throughout Peru for the treatment of persons insured by that fund and their families. Construction of the hospitals is to be financed by a State contribution of 1

[3] Sources: Hospital Obrero de Lima (Lima), Caja Nacional de Seguro Social del Peru, 1940; Informaciones Sociales (Lima), Caja Nacional de Seguro Social, January 1941; Acción Social (Santiago de Chile), Caja de Seguro Obligatorio, March 1941; International Labor Review (Montreal), International Labor Office, January 1941; Bulletin of the Pan American Union (Washington), May 1940; and report of Julian Greenup, United States commercial attaché at Lima.

percent of the pay roll of insured persons, together with a 2-percent contribution by the employers and other funds. Beginning February 2, 1941, the full employer contribution of 3.5 percent of the pay roll and the beginning of a contribution from workers of 1.5 percent of remuneration became effective in the Provinces in which hospital service has been installed. With these additions, social-insurance taxes will be greater in 1941, especially as other hospitals are completed and the larger contributions are put into effect.

The hospital at Lima, for the insured population of Lima and Callao, has 607 beds, of which 582 are for adults and 25 for children. Of those for adults, 270 are for medical cases, 225 for surgery, 44 for tuberculosis, 29 for maternity cases, and 14 for emergency patients. The hospital grounds have an area of about 10.4 acres.

A summary of the operations of the workers' hospital at Lima for the first 3 months of its operation (February, March, and April 1941) is given in the following statement.

Patients admitted	8,213
Patients hospitalized	1,158
Patients referred to outside clinics	7,055
Births	67
Readmissions	18
Discharges (well)	722
Deaths	40
Operations	192
Patients received from other hospitals of the fund	8
In the hospital, midnight, June 30	302

The following statement shows the number of patients discharged during the 3-month period, with the average length of their stay in the hospital.

	Number of cases	*Days*
Medicine	388	14.6
Surgery	254	14.2
Tuberculosis	32	21.5
Maternity	48	12.1

Employment Services

PLACEMENT WORK OF PUBLIC EMPLOYMENT SERVICE, JULY 1941 [1]

ALTHOUGH placements made by public employment offices have declined between June and July of each year since 1935, this year they increased 6 percent, to a total of 499,000. In addition, as the defense program dipped more deeply into the available labor supply, the number of job seekers registered for work at the end of the month fell below 5,000,000 for the first time since December 1940. The July placement volume, like that of the previous 2 months, was virtually as high as in the peak months of 1936; in that year, however, large numbers of workers were being placed on public-works projects. In 18 jurisdictions, including 6 of the Nation's 10 leading industrial States, fewer jobs were filled than in June. Despite a 62-percent increase for the country as a whole, 4 States reported fewer placements this July than in July 1940.

During the first 7 months of 1941, 3,000,000 placements were made by the employment service and more than 2,000,000 different individuals filled these jobs; in the comparable 1940 period, 1,900,000 placements were obtained for 1,300,000 different individuals.

Practically all of the New England, South Atlantic, Gulf, and Great Plains States made more placements in July than in June. Harvest operations, food processing, construction, and shipbuilding were mainly responsible for the gains in most of these States. Placements more than doubled the June volume in Mississippi and North Dakota. On the other hand, delayed delivery of materials and equipment and temporary dislocations of employment owing to priorities probably account for the declines in placements, particularly in six of the leading industrial States. The largest gains over July 1940 took place in Massachusetts, Rhode Island, South Carolina, and Virginia, where placements were approximately three times as great as last July.

Supplementary placements declined 14.5 percent from June to 131,000, the highest number for any July. Seasonal slackening in agricultural activity was responsible for the drop.

[1] Prepared by Research and Statistics Division, Bureau of Employment Security, Social Security Board.

Approximately 331,000 jobs were filled by men and more than 168,000 by women in July. Placements of men were 72 percent greater than those made in July 1940, and placements of women were 45 percent higher. The rate of increase for women over July 1940 was the largest yet attained this year. Placements in both groups were less than in July 1940 in Colorado and Hawaii; for men alone decreases were reported in Delaware and Oklahoma, and for women alone in Utah. As in most previous months, placements of women exceeded those of men in Delaware, the District of Columbia, and New Jersey.

More than 1,000,000 applications for work were received from men, an 11-percent advance over July 1940; the 507,000 filed by women represented a gain of 20 percent. At the end of July 1941 the active file of men was 14 percent lower than on July 31, 1940; for women, it was 3 percent lower. Male job seekers totaled less than on July 31, 1940, in 37 States, and woman registrants were fewer in 30 States.

TABLE 1.—*Summary of Placement Activities of Public Employment Service, July 1941*

[Data reported by State agencies, corrected to Aug. 23, 1941]

Activity	Number	Percent of change from—		
		June 1941	July 1940	July 1939
Total complete placements	499,065	+6.0	+62.0	+74.6
Regular	323,028	+11.6	+93.2	+97.8
Temporary	176,037	−2.9	+24.9	+43.8
Supplementary placements	131,022	−14.5	+14.5	+8.1
Total applications	1,597,299	−1.6	+14.0	+40.2
Active file	4,982,430	−2.8	[1] −10.8	[1] −18.6

[1] Based on comparable data; excludes Idaho.

TABLE 2.—*Summary of Placement Activities for Veterans, July 1941*

[Data reported by State agencies, corrected to Aug. 23, 1941]

Activity	Number	Percent of change from—		
		June 1941	July 1940	July 1939
Total complete placements	15,913	+2.2	+52.3	+34.2
Regular	9,001	+8.4	(1)	(1)
Temporary	6,912	−4.7	(1)	(1)
Total applications	51,662	+7.2	+3.8	+30.0
Active file	201,070	−8.2	[2] −13.0	[2] −29.0

[1] Total veteran placements by duration not reported prior to 1941.
[2] Based on comparable data; excludes Idaho.

TABLE 3.—*Activities of Public Employment Service, All Registrants, by States, July 1941*
[Data reported by State agencies, corrected to Aug. 23, 1941]

Social Security Board region and State	Complete placements							Total applications received		Active file as of July 31, 1941	
	July 1941				January–July 1941						
		Percent of change from—			Total		Supplementary placements				
	Number	June 1941	July 1940	Regular (over 1 month)	Number	Percent of change from January–July 1940		Number	Percent of change from June 1941	Number	Percent of change from July 31, 1940
Total	499,065	+6.0	+62.0	323,028	2,996,964	+53.7	131,022	1,597,299	−1.6	4,982,430	[1] −10.8
Region I:											
Conn.	9,833	+4.0	+85.3	6,981	60,230	+78.8	4	26,189	−5.4	45,141	−41.2
Maine	4,946	+8.4	+77.1	3,804	24,649	+98.8	22	9,132	−12.3	24,188	−29.7
Mass.	10,525	+5.7	+175.1	8,989	59,987	+140.3	55	50,365	−13.0	122,226	−41.4
N. H.	2,854	+27.8	+26.4	2,317	14,245	+7.6	66	5,243	−19.2	11,915	−45.8
R. I.	2,203	−.8	+203.4	1,846	14,688	+201.4	0	8,625	−18.7	35,407	−18.8
Vt.	1,320	+10.2	+13.5	866	7,610	+24.8	9	2,559	−4.0	7,559	−52.0
Region II:											
N. Y.	48,716	+2.0	+81.4	31,049	299,315	+80.7	2,555	183,061	−2.7	523,787	−17.7
Region III:											
Del.	1,428	−18.6	−3.0	751	10,065	+33.4	224	2,808	−18.8	7,611	−34.6
N. J.	16,874	−3.0	+121.6	11,177	106,236	+70.5	42	48,387	−26.7	191,644	−24.9
Pa.	21,811	+2.7	+75.1	16,847	130,971	+56.3	988	100,865	−16.2	315,917	−18.1
Region IV:											
D. C.	5,015	−8.3	+43.8	2,376	36,621	+44.9	1	13,063	−5.3	23,990	−31.2
Md.	6,852	+5.3	+57.8	3,906	41,355	+64.6	1,638	23,778	−17.9	40,477	−43.8
N. C.	10,831	+10.9	+108.0	7,939	117,908	+187.3	7,449	37,475	−4.4	101,029	+3.1
Va.	13,874	+22.4	+176.9	11,340	75,945	+128.2	741	22,552	−10.7	65,688	+18.2
W. Va.	4,611	+17.1	+63.6	3,215	25,737	+44.9	274	16,691	−13.5	61,021	−25.1
Region V:											
Ky.	4,634	+24.1	+87.0	3,692	26,085	+44.5	160	18,606	−9.6	88,366	−8.2
Mich.	15,876	−2.8	+34.6	10,909	96,589	+37.9	1,464	60,299	+6.8	137,842	−48.2
Ohio	24,983	−9.3	+78.2	14,674	161,202	+65.9	446	73,099	−10.4	259,932	−25.4
Region VI:											
Ill.	22,142	−1.9	+84.4	13,691	147,803	+65.2	1,039	98,504	+32.6	196,349	+7.0
Ind.	12,927	−.2	+95.8	8,822	87,010	+71.0	2,740	42,919	−13.0	229,204	+68.4
Wis.	11,440	+2.3	+49.5	7,395	64,769	+47.5	478	33,098	+8.9	90,587	−14.5
Region VII:											
Ala.	5,488	−27.8	+32.5	4,327	37,324	+19.8	330	35,391	+11.7	109,258	+4.7
Fla.	5,259	+15.0	+104.2	3,865	41,373	+108.4	152	20,997	−6.4	121,238	+55.4
Ga.	10,235	+.4	+22.1	5,598	62,680	+17.0	186	29,561	−14.2	113,920	−33.2
Miss.	9,496	+102.9	+154.8	8,699	31,396	+18.9	122	34,504	+62.6	84,473	+41.4
S. C.	7,768	+6.5	+204.5	6,627	50,816	+157.8	196	17,239	+14.3	53,323	−1.4
Tenn.	7,199	−22.7	+49.4	5,149	59,519	+75.8	[2] 4,186	22,958	+9.4	134,607	+13.4
Region VIII:											
Iowa	9,126	+8.5	+25.2	3,775	53,077	+20.3	543	22,454	+.8	68,509	−13.1
Minn.	11,220	+37.0	+29.4	5,158	49,243	+29.8	731	32,184	+7.9	94,667	−28.2
Nebr.	5,408	+41.3	+61.1	2,550	22,123	+22.0	624	8,869	−11.8	44,770	+.7
N. Dak.	5,969	+117.0	+32.3	3,804	18,455	+28.7	28	7,146	+28.5	28,134	−6.0
S. Dak.	2,679	+48.7	+43.7	1,293	10,874	+25.5	545	4,050	−7.0	20,468	−22.8
Region IX:											
Arkansas	7,363	+22.4	+81.0	3,498	44,510	+35.2	4,021	30,444	+87.2	94,119	+119.4
Kans.	8,815	+13.8	+93.6	4,208	48,369	+84.6	962	21,811	+7.4	56,396	−4.5
Mo.	14,993	+19.2	+104.8	10,557	99,570	+93.3	1,032	54,437	+2.3	211,505	+18.8
Okla.	5,217	+8.1	−25.7	2,723	28,723	−20.1	7,944	35,411	+40.1	81,121	−8.9
Region X:											
La.	6,083	+7.6	+109.6	4,371	41,234	+74.1	972	36,525	+12.7	141,627	+103.0
N. Mex.	1,600	−8.8	+30.4	950	10,619	+29.4	474	4,058	−17.3	24,207	−29.4
Tex.	37,908	+29.0	+29.9	23,045	222,369	+12.7	31,027	91,460	−15.3	385,699	+54.7
Region XI:											
Ariz.	2,276	−13.4	+8.6	1,216	18,368	−5.1	591	4,699	−20.6	18,611	−19.0
Colo.	4,444	−41.2	−45.1	2,838	28,585	−6.1	7,885	13,855	−7.8	48,367	−19.0
Idaho	4,038	−16.3	+30.8	1,648	19,498	+14.5	3,528	3,398	−3.5	29,966	[3]
Mont.	4,270	+39.8	+64.7	2,955	15,153	+25.1	823	5,208	−2.0	11,517	−46.6
Utah	3,064	−11.8	+29.7	1,534	14,524	+51.2	82	8,287	−3.8	24,007	+8.4
Wyo.	1,667	+23.0	+30.0	1,147	9,868	+64.8	40	3,194	−15.9	6,451	−1.8
Region XII:											
Calif.	36,616	−1.7	+62.6	20,901	218,829	+64.7	10,004	120,155	+5.7	330,790	−29.4
Nev.	2,794	+26.6	+90.1	1,785	11,701	+47.1	97	3,743	+6.6	3,439	−39.9
Oreg.	11,738	+21.2	+87.0	8,835	55,529	+64.2	18,819	18,096	−3.3	25,182	−34.6
Wash.	10,616	+2.8	+23.6	5,715	50,147	−17.4	14,660	26,877	−10.6	32,293	−70.0
Territories:											
Alaska	1,086	−31.8	+74.3	862	6,330	+59.5	23	1,506	−22.4	1,023	+8.0
Hawaii	935	−17.8	−11.1	809	7,138	+23.8	0	1,464	−27.9	2,863	−64.0

[1] Based on comparable data; excludes Idaho.
[2] Excludes 747 supplementary placements made in cooperation with the Arkansas State Employment Service which have been credited to Arkansas.
[3] Data not comparable.

TABLE 4.—*Activities of Public Employment Service for Veterans, by State, July 1941*

[Data reported by State agencies, corrected to Aug. 23, 1941]

Social Security Board region and State	Complete placements			Total applications received	Active file as of July 31, 1941		
	Number	Percent of change [1] from—			Number	Percent of change [1] from—	
		June 1941	July 1940			June 30, 1941	July 31, 1940
Total	15,913	+2.2	+52.3	51,662	201,070	−8.2	[2] −13.0
Region I:							
Connecticut	329	+4.1	+61.3	851	1,337	−2.4	−57.3
Maine	133	−17.9	+41.5	282	1,181	−12.8	−29.6
Massachusetts	226	+9.8	+119.4	1,521	6,347	−11.3	+9.8
New Hampshire	102	+29.1	+15.9	189	617	−23.9	−21.7
Rhode Island	69	+13.1	.....	221	884	−34.0	−13.6
Vermont	32	.....	.....	63	346	−12.8	−50.9
Region II:							
New York	1,088	−7.6	+86.6	3,265	11,369	−18.7	−26.6
Region III:							
Delaware	24	.....	.....	79	263	−26.7	−31.0
New Jersey	317	−8.6	+153.6	1,055	6,659	−5.7	−16.6
Pennsylvania	550	−3.7	+73.5	3,503	13,349	−10.2	−11.8
Region IV:							
District of Columbia	199	−10.0	+74.6	644	1,310	−8.4	−35.3
Maryland	180	−3.7	+3.4	763	1,138	−.4	−57.9
North Carolina	240	+4.8	+110.5	1,136	3,268	+9.3	+47.4
Virginia	179	+9.8	+110.6	351	1,169	−12.2	−12.8
West Virginia	84	+52.7	+20.0	601	2,898	+1.2	−29.7
Region V:							
Kentucky	151	+15.3	+139.7	605	3,666	−9.1	−6.8
Michigan	653	−15.6	+49.1	2,492	7,945	−10.9	−38.2
Ohio	937	−14.1	+90.1	2,567	12,115	−9.6	−18.4
Region VI:							
Illinois	747	−14.7	+99.7	2,960	7,515	−34.0	−7.2
Indiana	312	−11.1	+151.6	1,254	9,941	+3.0	+69.6
Wisconsin	396	−2.0	+88.6	1,360	6,259	−5.9	+.5
Region VII:							
Alabama	138	+16.0	+17.9	967	4,373	−10.3	+1.7
Florida	139	+19.8	+54.4	688	6,085	−1.7	+90.4
Georgia	197	+16.6	+7.6	645	3,108	−9.0	−34.5
Mississippi	265	+219.3	+381.8	921	2,583	+7.1	+45.7
South Carolina	180	−5.8	+205.1	425	1,266	+2.3	−25.2
Tennessee	157	−37.2	+34.2	533	4,570	−3.6	+.9
Region VIII:							
Iowa	537	−6.8	−3.6	1,099	4,045	+2.4	−14.9
Minnesota	405	+22.0	+32.4	1,708	5,471	−2.7	−34.1
Nebraska	357	+68.4	+197.5	324	2,408	−5.3	−4.6
North Dakota	200	+159.7	+60.0	190	1,170	−7.1	−7.4
South Dakota	97	+49.2	+27.6	174	1,098	−16.0	−15.3
Region IX:							
Arkansas	193	+24.5	+114.4	1,278	3,708	+8.3	+111.9
Kansas	336	+40.6	+94.2	718	3,032	−15.1	−16.4
Missouri	723	+25.3	+186.9	2,143	9,567	−10.8	+10.4
Oklahoma	190	−25.2	−42.9	1,635	4,745	+21.8	−17.0
Region X:							
Louisiana	97	+40.6	+44.8	923	4,429	+13.3	+108.7
New Mexico	43	.....	.....	178	1,405	−1.8	−22.7
Texas	1,062	+41.2	+11.2	2,130	11,330	−1.2	+49.8
Region XI:							
Arizona	101	−9.8	+40.3	197	1,154	−13.5	−17.4
Colorado	164	−12.3	−28.7	629	1,769	−21.2	−40.8
Idaho	235	−22.2	+9.3	131	1,893	−12.0	[3]
Montana	251	+71.9	+54.9	276	684	−25.0	−43.3
Utah	97	+32.9	−14.9	190	1,010	+.1	−16.7
Wyoming	69	+15.0	.....	157	310	+14.8	−13.6
Region XII:							
California	1,718	−10.3	+49.0	5,335	16,452	−10.6	−39.9
Nevada	142	+17.4	+46.4	192	166	+5.1	−43.2
Oregon	459	+7.7	+21.8	660	1,713	−13.4	−33.6
Washington	339	+.6	+16.5	1,341	1,761	+.4	−66.2
Territories:							
Alaska	43	.....	.....	69	38	.....	.....
Hawaii	31	.....	.....	44	151	−16.1	−65.6

[1] Where the number of veterans involved in either month was less than 50, the percentage change was not computed.

[2] Based on comparable data; excludes Idaho.

[3] Data not comparable.

INCREASED INDUSTRIAL PLACEMENTS OF NEGROES

IN THE 5 months January to May 1941, placements of Negroes in industry by State employment services were 47 percent higher than in the corresponding period of the preceding year, according to a recent announcement of the Federal Security Administrator.[1] From April to May of the current year, Negro placements rose 15 percent, whereas the placements of other persons increased 12 percent.

Although the placements of colored persons increased in all industries with the exception of agriculture, forestry, and fishing, the decided advance over 1940 was mainly the result of placements in construction and service industries. Placements of colored workers in construction and service industries January–May 1941 were double those made in the first 5 months of 1940. In the 1941 period under review placements in construction industries constituted 22 percent of all placements of colored workers as compared with 13 percent in January–May 1940. However, the service industries, although forming the greater part of the placements during the 5-month period in 1941, did not form quite so large a proportion as during the corresponding months in 1940.

In 16 States, the relative increase in placements in the first 5 months of the current year, as compared with January–May 1940, was greater for colored than for white persons. Included among these 16 States were Connecticut, New York, Delaware, New Jersey, Pennsylvania, Maryland, Michigan, Ohio, and Wisconsin, which rank high in the defense program. In Connecticut the placements of white workers rose 77 percent, while those of Negro workers nearly tripled. In New York, placements of white persons rose 79 percent and those of Negroes 111 percent. In Pennsylvania, the increase in placements of white persons was only 46 percent, while that in placements of Negroes was over 100 percent.

The placements of Negroes in the first 5 months of 1941 totaled 414,595, which constituted 20 percent of all the placements by the State employment offices during that period. In 8 States—Georgia, South Carolina, Delaware, Mississippi, Louisiana, North Carolina, Alabama, and Virginia—and in Hawaii and the District of Columbia, "approximately 50 percent or more" of all placements were from the Negro groups.

The accompanying table records the placements of colored workers and gives the ratio of such placements to placements of white workers.

[1] United States. Federal Security Agency. Social Security Board. Press release No. 858, Washington, August 11, 1941.

Analysis of Placements of Negro Workers by States, January–May 1941 [1]

Social Security Board region and State	Number	Percent of change,[2] January–May 1940	Percent of all placements
Total	414,595	+46.6	20.4
Region I:			
Connecticut	2,294	+191.8	5.6
Maine	56		.4
Massachusetts	560	+116.2	1.4
New Hampshire	41		.4
Rhode Island	148		1.4
Vermont	11		.2
Region II: New York	30,326	+110.5	14.9
Region III:			
Delaware	4,182	+64.2	60.8
New Jersey	16,720	+79.9	23.2
Pennsylvania	9,940	+112.2	11.3
Region IV:			
District of Columbia	16,894	+52.0	64.6
Maryland	10,928	+85.3	39.0
North Carolina	47,933	+165.3	49.2
Virginia	24,421	+87.5	48.1
West Virginia	3,682	+39.9	21.4
Region V:			
Kentucky	3,736	+22.1	21.1
Michigan	5,070	+144.7	7.9
Ohio	18,595	+97.1	17.1
Region VI:			
Illinois	9,872	+59.9	9.6
Indiana	5,023	+51.8	8.2
Wisconsin	481	+120.6	1.1
Region VII:			
Alabama	11,850	−3.4	48.9
Florida	13,502	+118.7	42.8
Georgia	27,243	+22.1	64.5
Mississippi	9,159	−14.9	53.2
Region VII—Con.			
South Carolina	21,778	+128.8	60.9
Tennessee	17,326	+57.4	40.3
Region VIII:			
Iowa	319	−.3	.9
Minnesota	82		.3
Nebraska	284	+178.4	2.2
North Dakota	21		.2
South Dakota	13		.2
Region IX:			
Arkansas	8,519	+39.3	27.4
Kansas	2,451	+82.0	7.7
Missouri	5,952	+24.9	8.3
Oklahoma	3,138	−61.4	16.8
Region X:			
Louisiana	15,950	+29.0	54.1
New Mexico	340	+76.2	4.7
Texas	48,085	−11.6	31.0
Region XI:			
Arizona	4,567	−4.3	33.9
Colorado	1,157	−25.7	7.0
Idaho	16		.2
Montana	76		1.0
Utah	10		.1
Wyoming	90		1.3
Region XII:			
California	7,048	+30.5	4.9
Nevada	160	+175.9	2.4
Oregon	89	−27.6	.3
Washington	194	−68.6	.7
Territories:			
Alaska	224	−13.5	6.1
Hawaii	4,039	+40.4	79.7

[1] Data reported by State agencies, corrected to July 11, 1941.

[2] Where fewer than 50 colored placements were involved in either period the percent of change was not computed.

Housing Conditions

FARM SECURITY ADMINISTRATION DEFENSE HOUSING

IN 6 years' experience with rural housing the Farm Security Administration has built or repaired nearly 30,000 houses. This agency is now engaged in providing permanent and temporary housing for occupants of many of the 6,400 farms already displaced by the purchase or lease for defense purposes of more than 4,000,000 acres of land. When the report from which the data in this article were taken [1] was prepared the Administration's other defense-housing tasks included building permanent shelter for industrial workers in three crowded defense areas and, because of experience with the construction and management of migratory labor camps, providing trailers and dormitories as "stop-gap" housing for defense workers.

Regular construction activities are also being continued, principally in connection with tenant-purchase and migratory-labor-camp programs. These programs, aimed at insuring the health and security of many farm families, are also an aid in strengthening morale for national defense.

Management is another broad phase of rural housing coming under the jurisdiction of the Farm Security Administration. Most of the management duties are connected with homestead developments, the tenant-purchase farms, and the migratory-labor camps, and will remain so until the defense projects are past the construction stage.

Displaced Families

In the effort to supply Army needs for level acreage for proving grounds, maneuver areas, bombing fields, and anti-aircraft firing ranges, displacement of farm families is inevitable, it is stated. Land is needed for armament industries which are being decentralized as a safety measure. Sometimes the land required is in sparsely populated areas, sometimes in the more thickly settled places. This means that a varying number of families must move on short notice.

Displacement has been concentrated largely in the South and in the Middle West.

[1] U. S. Department of Agriculture, Farm Security Administration, Press release: Rural Housing by Farm Security Administration, dated May 9, 1941.

As a part of the relocation program, the "Hinesville Plan" was established and is being followed. In Hinesville, Ga., where owners, tenants, and day laborers were living, the program of aid was necessarily varied. Loans and grants were made to aid in moving and relocation. Many people, however, particularly tenants and laborers with few resources, were unable to find a new home or new employment. Scarcity of family-type farms was a major difficulty. Therefore large tracts were acquired by the FSA and a nonprofit association, created under the Georgia laws, was given authority to lease or purchase land and carry on agricultural and related operations. Families in this area are being enabled to earn their living this year by development work on the family-size homesteads. Eventually they can settle on the homesteads if they do not find employment elsewhere. A plan is also being developed to furnish incomes for these families by using part of the project timberland as a "turpentine farm."

Permanent Housing

Permanent houses built by the FSA in crowded defense areas are being erected under the authority of the Lanham Defense Housing Act, with the FSA acting as agent of the Federal Works Agency. Buildings are being constructed by private contractors. The three such projects authorized when the FSA made the report under review consisted of 150 units at Pulaski, Va., 200 at Radford, Va., and 1,000 at Greenbelt, Md.

The Radford houses are to cost from $2,540 to $3,060 each, some with two and others with three bedrooms. All are of frame construction with asbestos exteriors, roofs of composition shingle, complete bathrooms, and central warm-air heating systems. Rents are to be from $21 to $35 monthly. Some units are in the town of Radford and others are on farms within easy driving distance of the defense powder plant where occupants are to work.

Dwellings of construction similar to that at Radford are being provided at Pulaski for the use of employees in a bag-loading plant to serve the Radford plant.

At Greenbelt the new units are to shelter defense workers employed in the Washington, D. C., area. This development, begun several years ago,[2] was so planned as to allow expansion to three times its original size. Thus, defense housing there may be erected at considerable savings to the Federal Government, as roads, sewers, water, etc., are already installed.

[2] For a description of the Greenbelt, Md., project, see the Monthly Labor Review, June 1937.

Temporary Housing

Temporary units built as a "stop-gap" to shelter workers while permanent dwellings are being erected are of a type that can be moved from one area to another to meet demand as it arises. For men with families modern trailers are being provided and for single men demountable dormitories. The FSA was the only Government agency with experience in the use of movable housing, having introduced mobile units as a part of the migratory-camp program. On 14 defense sites trailers and dormitories have been supplied, to house 2,109 families and 4,289 single men at any one time.

Regular Housing Activities

Housing is only one part of the FSA work, its major function being to help needy farm families to become self-supporting. Carrying out the broader program has already involved construction of thousands of farm dwellings and barns. Over 29,700 families have benefited from the erection and repair activities of this agency.

The greater part of the regular rural housing activity is at present in connection with building for tenant purchase. Loans are made to tenants, sharecroppers, or farm-laborer families to enable them to buy farms of their own. Private contractors do the building using low-cost plans developed by FSA engineers.

Both permanent and mobile camps are furnished for migratory agricultural workers. The permanent camps are placed where the demand for farm labor continues throughout most of the year. Typically, a permanent camp consists of community buildings with sanitary equipment, laundries, isolation wards, first-aid stations, and a meeting place; and shelters, mostly of wood or steel, to house the migrant families. There are usually some small inexpensive cottages, also.

Mobile camps, located where the need for labor is of short duration, are planned so that the equipment can be moved by truck. Both the workers' families and the facilities (such as laundries and showers) are housed in tents. The other basic necessaries, such as power plants and first-aid stations, are in large trailers. Of 49 camps provided, 40 are of the permanent and 9 of the mobile type. They house 15,000 families at a time and, owing to the usually short term of occupancy, are capable of sheltering 50,000 families in the course of a year. The units consist of 1,739 labor homes and 11,304 shelters and tent platforms. The camps are designed for a short-term occupancy, but the labor homes are suitable for year-round use. Some of the labor homes in California and Texas are 2 stories in height and contain 6 apartments each; the simple construction cost of these is approximately $1,600 per apartment.

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Rehabilitation Work

Under the rehabilitation program the FSA has loaned funds to 850,000 farm families to reorganize farm operations on a more efficient basis. These loans are supplemented by rehabilitation work to improve the living quarters and health of the borrowers. For example, water supply is freed from contamination and windows are screened. A great deal of labor is supplied by the WPA and NYA. The farm families do some of the work and also agree to perform conservation and improvement work on their land in return for grants.

Management

The management problem is large and difficult, as the FSA has more than 150 rural communities and 3 greenbelt towns under its supervision. On homestead developments the problem goes beyond rental collection, maintenance and repair, and turn-over, as methods of running farms must be examined and instruction given where needed. The report reviewed states: "In short, management functions on homestead projects cover the whole range of development of technical skill in farming and homemaking, managerial ability, thriftiness, cooperative spirit, and similar abilities and skills that low-income farm families in the projects need if they are to take full advantage of their opportunities." Tenant-purchase families receive the same sort of guidance but in less degree. In migratory labor camps standard housing-management practices are combined with efforts to help needy farm families help themselves.

HOUSING FOR NEGRO EMPLOYEES OF NORTH CAROLINA UNIVERSITY

THE successful application of the insured-mortgage plan of the Federal Housing Administration to low-cost housing for Negro families is a prominent feature of a project known as "Knolls Homes," being carried on at Chapel Hill, N. C., where the central buildings of the University of North Carolina are located.[1]

The basic plan of this Negro housing development is a novel approach to the problem of providing comfortable sanitary shelter for low-income families without a Government subsidy.

Of the large service staff for the maintenance of the college buildings and for the operation of the power plant, water and telephone facilities, hotel, laundries, and college restaurants, approximately 250 are Negroes who were primarily engaged as janitors, waiters, or dishwashers with incomes of $780 to $1,040 per annum. In addition,

[1] United States. Federal Housing Administration. Insured Mortgage Portfolio. Washington, second quarter, 1941.

in the great majority of cases, the wife supplements the annual family income by an average of 50 percent, by her earnings from laundering and other domestic work.

University officials realized the desirability of providing housing for Negro employees, not only for general social considerations, but also as a practical measure to increase their morale. However, no university or State fund was available for the purpose. The enterprise was finally made possible through the Service Employees Corporation, a group of 10 key men, which had been constituted for some time to carry on a number of nonprofit activities for the betterment of the living conditions of workers on the staff of the university.[2] The business manager of the corporation is the assistant controller of the university which approves the corporation's activities, although the two organizations are not officially connected.

Financial and Other Arrangements

From the financing standpoint, the Service Employees Corporation decided that high percentage, 25-year mortgages, insured under section 203 of the National Housing Act would meet the requirements of the contemplated project.

A 40-acre tract not far from the existing Negro sections of Chapel Hill and the neighboring town of Carrboro was the selected site. The land is rolling, of good elevation, well wooded, and apart from the principal thoroughfares but convenient to Chapel Hill. Each of the 66 lots is large enough to allow for a vegetable garden, but not too large for careful upkeep by the Negro owners in their spare time.

The value of the lots, after improvement and development, was appraised at $300 each. As most of the prospective purchasers, however, will not be able to make full payment in cash, a plan has been devised under which a minimum payment of $75 in cash is called for from each purchaser. This sum is greater than the cost of the undeveloped land per lot. In addition, each buyer agrees to work out the remaining purchase price of the lot by services rendered in the development and improvement of the project.

Under this arrangement, substantially all the unskilled labor required in developing the project is performed by the purchasers themselves and a fair value is placed on the specific services performed. For example, an allowance of $25 toward the purchase price of the lots is allowed each purchaser for clearing underbrush on the land, $25 for work on the development's roadway, on landscaping and on laying water lines, $25 for digging the septic tank and ditch drain for each house, and $50 for planting and grading the lot. In addition, the purchasers contract to provide additional labor at equivalent rates in opening up further sections of the development and in developing other physical improvements contributing to the value of Knolls Homes as a whole.

[2] For description of housing for white employees, initiated by this corporation, see Monthly Labor Review, February 1941 (p. 299) or Serial No. R. 1224.

The members of the Service Employees Corporation are assisting without charge in the promotion, management, and engineering of the project.

Characteristics and Cost of Houses

The houses on the project have been planned with emphasis "on simple attractive design and on maximum economy in outlay commensurate with sound construction standards." All the dwellings are to be of frame construction and well insulated. The houses under way, when the report under review was being prepared, have concrete footings, brick curtain foundation walls, white plaster interior walls, and pine floors. Electric stoves and coal-fired hot-water heaters were to be installed. The houses will range in size from 3½-room to 6-room units. The greater number of them will probably be 1-story, 5-room structures with living room, 3 bedrooms, and kitchen. The 6-room dwellings will have 2 stories, with 2 unfinished bedrooms. The kitchens will in most of the houses include space for dining. In most of the houses there will be an unfinished half basement, which can be developed by the occupants into a laundry or a general utility room.

As indicated above, the Knolls Homes houses are to be financed by 25-year FHA insured home mortgages, which will probably range from $1,700 to $2,400, according to the size of the dwelling. When taxes and hazard insurance are included, the monthly payments on these homes under the FHA scheme will range from approximately $12.50 to $17.50. At the time of the article under review applications for mortgages of $2,400 each on the first five houses had been filed.

Selection of Participants

While the wage scale for Negro service employees at the University of North Carolina conforms in general to the prevailing rates for unskilled labor, the status of these workers from the viewpoint of continuity of employment is considerably above the average for persons in this occupational group. Moreover, since the university itself is the employer, the outlook for job stability in the future for these service workers is propitious. Great care has also been taken in the selection of the home owners in this development. Applications for membership in the group are to be passed upon by an executive committee of the university's Negro service employees. Members of the university's department of political science and department of public welfare and social work, and its credit supervisor, have been advisers to the executive committee.

Cooperation

CONSUMERS' COOPERATIVES IN THE MIDDLE WEST

SEVERAL studies, which supplement each other, have been made recently, dealing with cooperative development in various parts of the Middle West.[1] Two of these cover cooperative oil associations in Minnesota and Nebraska, respectively, and the third deals with the development and social and economic relationships of consumers' cooperatives of all kinds in the "upper lake region"—a section embracing parts of Michigan, Minnesota, and Wisconsin.

The reports on the oil associations indicate that these associations were doing 10.6 and 14.0 percent, respectively, of the total business in petroleum products done in Minnesota and Nebraska. The associations studied in the upper lake region ranged all the way from those that dominated the local retail field to those that were relatively ineffective in the local economy.

Cooperatives in the Upper Lake Region

The report on the consumers' cooperatives in the upper lake region of Michigan, Minnesota, and Wisconsin paints a picture of generally successful associations built up from most unpromising economic and social conditions. In this region the rural districts where most of the cooperative associations are found are very thinly settled, averaging not more than 5 persons per square mile. The land is of poor quality and the wooded sections are for the most part covered with small second-growth timber, only a small part of which is large enough to cut. Neither lumbering nor agriculture, therefore, offers much return as a single source of livelihood. In fact, according to the author, "the agricultural picture of this area is one of rural hardship and poverty."

The iron mines in Minnesota and northern Michigan and the copper mines of the latter State formerly offered the chief source of employment in the area. Increasing mechanization in Minnesota and the

[1] University of Minnesota. Agricultural Experiment Station Bulletin No. 351: Minnesota Cooperative Oil Associations, by E. Fred Koller and O. B. Jesness. [St. Paul, 1941.]

University of Nebraska. Agricultural Experiment Station Bulletin No. 333: Cooperative Oil Associations in Nebraska, by L. F. Garey and Jess Mason. Lincoln, 1941.

Kercher, Leonard C.; Kebker, Vant W.; and Leland, Wilfred C.: Consumers' Cooperatives in the North Central States. (Edited by Roland S. Vaile.) Minneapolis, University of Minnesota Press, 1941.

high costs of mining in the deep copper mines of Michigan, in comparison with other copper areas, have reduced the importance of mining as a source of wage-earner income in the section. The defense program has given a temporary revival of importance to the mining of both kinds of ore, however.

In the economy of the whole region, the Finn has played an important part—as miner, lumberjack, and farmer—and he also has been the backbone of the cooperative movement there. In the seven Michigan and Minnesota counties covered by the study,[2] the Michigan counties were 52 percent Finnish and the Minnesota counties 73 percent Finnish, in 1930.

In these counties the Finnish people, joined increasingly of late years by other nationalities, have built up a network of local cooperative associations of various types, as well as district federations carrying on educational, service, and distributive functions. Not only are the material needs for food, clothing, furniture, and gasoline satisfied; cooperative telephone associations, credit unions, cooperative park associations, and insurance organizations provide for recreational and other wants.

The immigrant Finn, ignorant of English, had to take what employment he could find—usually manual labor in mine, woods, or farm. His low economic status and his language difficulties created barriers between him and the rest of the community which tended to throw him back upon his own nationality group for the satisfaction of a sense of "belonging." The social halls built by the Finns, the Finnish-language papers, and finally the cooperative associations to which they turned as a relief from the economic exploitation of low wages and high prices, were the results.

Associations in the entire region were studied first-hand in 1937 and again in 1940.[3] Of the total, 15 were selected for intensive study. Of these 8 were in Minnesota (Cambridge, Cloquet, Ely, Floodwood, Hibbing, Nashwauk, Orr, and Virginia), 5 were in Michigan (Hancock, Rock, Rudyard, Sault Ste. Marie, and Wakefield), and 2 were in Wisconsin (Brule and Spooner).

PLACE OF COOPERATIVES IN THE COMMUNITY

The author found that the associations situated in hamlets or small villages were often the dominant economic and social institutions in the whole surrounding communities. This was true in Brule, Embarrass, Orr, and Rock. In Brule the cooperative had a virtual monopoly of retail trade in its trading area, and in the other three communities

[2] Gogebic, Houghton, Iron, and Marquette in Michigan, and Carlton, Itasca, and St. Louis in Minnesota.

[3] The data here presented were all taken from the part of the study that was made by Professor Kercher. Other sections of the study included an analysis of the regulative accomplishments and possibilities of consumers' cooperatives in the present economy, by Professor Kebker, and a detailed analysis of two cooperative wholesale associations in Minnesota, by Professor Leland.

the cooperative's share of the retail business ranged from 70 to nearly 90 percent; and in addition all provided "a wide range of economic services" through the stores, as well as being focal points of community social activities.

The Orr and Floodwood associations, the author found, represented farmer-sponsored institutions competing in the economy of the villages where they are situated, but socially apart from the life there.

In towns of 2,500 to 7,000 population the cooperatives were "playing commercial roles of varying significance." At Nashwauk and Cloquet the cooperatives were "clearly the dominant retail establishments," whose prices virtually set the price level there; and at Ely, Cambridge, and Spooner, they were "efficient economic institutions competing successfully as one among many." In other places, as at Wakefield, they were economically ineffective. In general, the findings indicate with regard to the associations in these towns that—

> First, the cooperatives in this movement can compete and are competing effectively as business institutions in ordinary town communities where the societies have gained financial strength, have developed at least a core of loyal members, and have enjoyed reasonably competent administration and management. Second, those cooperatives have been most successful that have extended their services into varied lines serving the consumer at as many points as possible. And, third, in the past the cooperatives in these town situations have, for the most part, been socially isolated, forming a sort of subcommunity and carrying on social and cultural activities divorced from those of the larger community; in recent years, however, the social barriers that have isolated the cooperative institution have been showing signs of breaking up.

In the small cities of 10,000 to 20,000 population (such as Hibbing and Virginia), the cooperative was only one of many business organizations. It had stiff competition from local business men who regarded it as merely another form of competing business. In the abovementioned cities the cooperatives were holding their own, however.

NATIONALITY AND OCCUPATIONAL MAKE-UP OF ASSOCIATIONS

Of the associations selected for extensive study, all but 3 (Cambridge, Minn.; Sault Ste. Marie, Mich.; and Spooner, Wis.) were predominantly Finnish. Although other nationalities were found in the membership of all the Finnish associations, Finns formed 35 percent of the total in Cloquet, 50 percent in Nashwauk and Brule, 50 to 90 percent in the various communities served by the Hancock association, 60 percent in Ely and Floodwood, 65 percent in Hibbing, 70 percent in Virginia, 80 percent in Rudyard, 90 percent in Rock, and practically all of the membership in Wakefield. Of the three non-Finnish associations, the Sault Ste. Marie association was a composite of all nationalities, including Jews and Gentiles, white persons and Negroes; the Cambridge association was mainly Swedish, but with Germans predominating in two communities served by it; the nationality make-up of the Spooner association was not given.

In the Hancock association, farmers formed 35 to 60 percent of the membership of the various branches, copper miners 30 to 55 percent, and at the Chassell branch, a considerable proportion of the members were fishermen. The members at Rock were ex-miners and farmers; and at Rudyard, farmers formed 75 percent of the membership. In the Wakefield association 50 percent were iron miners and 40 percent were part-time farmers or on relief work, etc. The Hibbing associaciation was also composed principally of iron miners and farmers. In the Cloquet association, which has branches in several nearby localities, lumber-mill workers accounted for 55 percent of the membership, farmers for 40 percent, and government employees, professional people, or businessmen, for 5 percent. At Ely 50 percent of the members were iron miners; 20 percent, farmers; and 30 percent, government employees, railroad workers, or professional people. At Nashwauk 60 percent were iron miners, 30 percent alternated mining and farming, and 10 percent were in full-time farming or other occupations. The Orr association was almost entirely composed of farmers, and farmers constituted 85 percent of the cooperators at Brule (but in that association a large proportion of them were formerly lumberjacks or miners). In Virginia 60 percent of the members were iron miners, 25 percent farmers, and 15 percent government employees.

In the Finnish associations, even when the Finns were a greatly reduced majority or were even in the minority, they were still in control. There was a tendency among the non-Finnish elements to leave to the Finns the work of running the association, and as the Finns (especially the older generation) rather jealously guarded this privilege, the result was that the directorships were quite largely still composed of Finns, a large proportion of whom were of the older immigrant group.

Although the intense loyalty of this rgoup has been of inestimable value in the survival and expansion of the associations, the author points out that the situation also carries a decided element of weakness. Time will thin the ranks of these older Finns, and the younger, American-born Finns and the non-Finnish members must then assume more and more responsibility if the associations are to survive.

ADMINISTRATION AND MEMBERSHIP RELATIONS

Among the Finnish associations the "most characteristic pattern * * * is that of a strong board [of directors] supported by an alert minority of the membership. Within this pattern the position of the manager varies from that of a thoroughly subordinate servant to that of a sympathetic leader."

Cloquet, which has the largest retail cooperative in the United States, presents the situat on of "an unusually democratic and decentralized management," but one in which the directors retain the larger

share of power. More balanced distribution of authority between directors and manager was found in Ely, Floodwood, Virginia, and Hancock. Manager dominance—frequently associated with an apathetic membership, dissension within the association, or a weak board—was found, at least for limited periods, at Aurora, Rock, and Wakefield. In this connection the author remarks that "This pattern of strongly centralized management tends to be the dominant one in the societies with predominantly American memberships. * * * The element of strength in the pattern of manager dominance is its fostering of business efficiency if the manager is competent. Its marked weakness is that it tends to result eventually in an uninformed membership and an impotent board."

EVALUATION OF THE FINNISH-INITIATED MOVEMENT

On the basis of his detailed first-hand study, the author concluded that, although the movement in the upper lake region was founded on a genuine economic and social need which is likely to continue, a gradual transition from close-knit Finnish collaboration is in process which must be taken into account. The associations have thriven best in the neighborly settings of the village and small town, and democratic control and decentralized organizations are essential features. The criticisms that this means a loss in efficiency and that such organizations are ill-adapted to the high-keyed competition of present-day American life can be met, the author believes, by the already recognizable trend toward the development of "specialized and respected leaderships in the growing central organizations." Another hopeful factor is the development of "improved and better coordinated techniques on the part of all central organizations for educating the general membership, for training local employees, and for securing better business practices."

Other features to be considered in evaluating the movement are the growing support of consumers' cooperation among church-minded people, an increasing interest on the part of the schools, and some manifestations of sympathy from State and Federal officials. Against these must be considered the hostile press, and the active opposition of some business organizations.

The acquisition and retention of loyal and competent personnel in cooperatives is essential, and as changing conditions emphasize this need, improved and intensified training will be required, as well as modification of personnel policies in some of the associations. The author found that, in general, working conditions in these cooperatives were good. Also, opportunities for advancement were good up to a wage level of $150 a month; beyond that the positions were relatively scarce.

The associations in this area have weathered severe tests successfully, a situation which has been largely the result of the advice and guidance of the Central Cooperative Wholesale to which the associations are affiliated. Thus, during the depression of 1920–21, only 2 of the 45 member associations of the wholesale failed, and in the depression beginning in 1929, not one failed, and "only a few have been in straitened circumstances."

The greatest weakness in the financial structure of the movement in the upper lake region is the lack of adequate capital needed for the most efficient business operations.

As to competitive merchandising efficiency, it was found that the cooperative general stores possessed marked advantages over their private competitors with respect to operating costs, besides the advantage of return of patronage refunds. With respect to Rochdale practice, "the movement is on a sounder ideological basis than at any time in the past."

As to its future trends, the report concludes:

> Evidence presented here seems to warrant the conclusion that it has sufficient momentum, represented in financial strength, accumulated experience, and foresighted leadership, to insure the overcoming of its weaknesses. Its growth is not likely to be spectacular, but rather a continuation of its present gradual extension into new lines of merchandise, into new fields of economic and social services, and into different non-Finnish sectors of the population in the smaller communities. Moreover, there is likely to be a slow development of manufacturing activities involving the simpler and less expensive processes.
>
> The author finds no convincing evidence that the movement will grow markedly in the near future through increased middle-class support or through expanded commercial operations in the urban setting with a population of more than 15,000 to 20,000. Moreover, except in the small village communities, it does not seem likely that the movement will displace private enterprise to any great extent within the next decade or so but will continue to function as a major competitive factor stabilizing prices to the advantage of the consumer on the local market.
>
> Within the movement the trend toward the expansion of voluntary regional and district federations and the tendency toward democratic centralization of influence are likely to continue. Here again the destinies of the movement are linked more or less closely to those of democracy. But if democracy has validity in the economic as well as in the social sphere, if faith in the common man is not a misplaced ideal, if education, free thought, and free choice are more enduring than ignorance, force, or external regimentation, then this social movement has natural and persistent vitality in its make-up.

Cooperative Oil Associations in Minnesota

The study of oil associations made by the Agricultural Experiment Station of the University of Minnesota states that the volume of light oils distributed cooperatively in Minnesota rose from 73,196,815 gallons in 1937 to 83,183,200 in 1939. In the latter year the business done by cooperatives was 10.6 percent of the total oil business in the

State—"second only to that of Standard Oil of Indiana which handles about 17 percent of the total." Within the State the cooperative business relative to the total business varied considerably, ranging from less than 2 percent in Ramsey and Hennepin Counties (containing St. Paul and Minneapolis) to 69.2 percent in Kanabec County.

The first oil association in the State was formed in 1921. By 1940 there were 189 active oil associations, in addition to other types of distributive cooperatives doing some oil business along with other types of merchandising. Some of these associations serve only a single community, plus the farmers in an 8 to 12 mile radius. Others operate a number of stations over one or more counties.

In the study, analysis was made of the financial status of 92 associations. This showed average net assets of $26,031 per association (but 5 associations had over $50,000 each). Operating capital (current assets) averaged $14,679. The proportion of total assets tied up in accounts and notes receivable averaged 22.3 percent, but ranged as high as 69 percent. Of the total resources of the associations only $15,266 (58.7 percent) was furnished by the members in the form of share capital.

With regard to current solvency, the generally accepted standard of which is a ratio of current assets to current liabilities in the proportion of 2 to 1, the weighted average ratio of all associations was 1.84 to 1, or "below the level necessary for most effective operations." Among the individual associations the ratio ranged from less than 0.50 to 1 to over 3.50 to 1. The investigators found that "the financial condition of these associations, on the whole was quite satisfactory."

The report notes that more and more of the associations are concentrating on the handling of "co-op label" products obtained from cooperative wholesales. Also they are expanding the lines of commodities handled.

Of 189 oil associations in the State, 128 were found to be affiliated with cooperative wholesales.

Sales in 1939 averaged $69,627 per association, and net income averaged $4,449, or 6.39 percent of sales. Operating expenses averaged 17.68 percent of sales, but ranged in individual associations from 10.48 to 25.30 percent. Factors influencing costs were variations in services rendered, in volume of business, and in compensation paid for labor. An item of loss not sufficiently realized, the authors believe, is that of shrinkage. Among the whole group the loss from this source amounted to 2.13 percent of their total sales. "According to widely accepted standards of efficiency, shrinkage on gasoline should not exceed 2 percent."

Patronage refunds to members averaged $3,091 per association, or about 5 percent of the net sales.

The report notes that "a nearly universal need confronting these associations is that of improving their efficiency of operation. In recent years association operating costs have gone up." More adequate accounting records, periodic audits supplemented by monthly statements, and the adoption by the wholesales of a regular business advisory service are among the steps recommended. It is pointed out that upon the ability of the associations in the direction of efficiency and service depends the future success of the cooperative oil movement.

Cooperative Oil Associations in Nebraska

The report made by the Agricultural Experiment Station of the University of Nebraska apparently was based on a partial survey of cooperative oil associations in that State.[4] It states that, over the 4-year period 1935–38, 14 percent of the petroleum business in the State was done by cooperatives. Independent private companies accounted for 48 percent and major companies for 38 percent.

For purposes of the study the 217 oil associations studied were divided into those operating service stations (169) and those having bulk stations only (48). Over the 3-year period 1936–38 the total assets of the service stations averaged $20,450, as compared with $9,947 for the bulk stations. The service stations averaged 360,245 petroleum units [5] per year, and bulk plants 264,822 units.

Comparative data for associations buying their supplies from cooperative wholesale associations and from private wholesalers indicated that those affiliated with cooperative suppliers had total operating expenses amounting to 16.72 percent of sales as compared with 15.27 percent for those obtaining their supplies from private sources. However, the cooperative suppliers permitted a higher gross margin—i. e., 24.74 percent, as compared with 22.43—and net earnings were 8.01 as compared with 7.15 percent. The report points out that part of the larger gross margin obtained by the group buying from cooperative wholesales "was undoubtedly the result of patronage dividends" from the wholesale. Loss from shrinkage as shown for 1938 was considerably higher than in the Minnesota oil associations in 1939—2.9 compared to 2.13 percent—and even this figure represented a decrease from 3.9 in 1937.

Accounts and notes receivable averaged 24.7 percent of total assets for the service stations and 21.5 percent for the bulk plants.

[4] According to a statement in the August 13, 1941, issue of the Nebraska Union Farmer, most of the Farmers' Union cooperatives apparently were not included.

[5] I. e., one gallon of gasoline, kerosene, tractor fuel, or distillate, one quart of oil, or 1 pound of grease.

Labor Laws and Court Decisions

COURT DECISIONS OF INTEREST TO LABOR

Peaceful Picketing Permitted Under Sabotage-Prevention Act

THE California Sabotage-Prevention Act does not prohibit peaceful picketing of a national defense project, according to a recent decision of the State Superior Court for Los Angeles County.[1] Picketing for a legitimate purpose, although it may remotely and incidentally interfere with national defense, was held not to constitute "sabotage" within the meaning of the law. If the Sabotage-Prevention Act outlawed such picketing, the court said, it would be unconstitutional as a deprivation of the right of freedom of speech.

In this case, a union engaged in peaceful picketing of a national defense project in an effort to unionize a contractor's employees. The picketing interfered with delivery of personal property to the contractor. However, the court declared that the interference with national defense was "remote" and but an "incident" of lawful picketing. The legislature had not intended to prohibit peaceful picketing, as the law itself provides that "nothing in this act shall be construed to impair, curtail or destroy the rights of employees and their representatives to * * * engage in concerted activities, for the purpose of collective bargaining, or other mutual aid or protection." The defendants' activities were excluded from the operation of the act, even though they were not employees, former employees or representatives of the employees of the particular employer who was involved. The court held that the word "employees," as used in the exemption provisions of the act, referred to the general class of "workmen."

Union Denied Injunction Against Other Unions Pending Certification as Employee Representative

An independent union which had asked the National Labor Relations Board to certify it as the representative of the employees was not entitled to an injunction to prevent the employer from dealing with other unions, according to a decision of a Federal district court.[2]

[1] *Nelson* v. *Los Angeles Building Trades Council.*

[2] *Montgomery Ward Employees' Association* v. *Retail Clerks International Protective Association* (38 Fed. Supp. 321).

The court also refused to enjoin the other unions from picketing the employer. The decision was based on the grounds that the question of representation was for the National Labor Relations Board to decide, and that courts are not permitted to establish rights prior to a determination of the Board.

It was pointed out by the court in its decision that the filing of the certification petition did not create in the employees' association "a right to prohibit activities that otherwise would be lawful." The court also declared that the issuance of an injunction would deny to the unions their constitutional right of freedom of speech. Furthermore, the Norris-LaGuardia Act protects against judicial interference with peaceful persuasion by labor unions, and that act, the court said, was not amended by the National Labor Relations Act. As an additional reason why the injunction should not be granted, the court referred to a decision [3] of the Supreme Court rejecting the right of courts to prohibit picketing, based upon the National Labor Relations Act.

Union Agreement to Fix Prices Held Void Under State Antitrust Law

Under the New York antitrust law, a union agreement which provides for the setting of prices is invalid, according to a recent decision of the appellate division of the State supreme court.[4] The contract in question, which was between a teamsters' union and a number of employer associations, provided for a stabilization committee with authority to fix prices to be charged the public for the moving and storage of goods. In addition, the contract fixed a scale of wages for union employees and provided that certain "unfair practices" were to be eliminated from the industry. Among these practices was one described as follows: "Quoting or obtaining or attempting to secure a price for any service which shall be less than the sum of the wages necessary under * * * the agreement and of reasonable items of expenses and overhead entering into the cost of operation."

The court held the contract to be void, in spite of a provision of the law making it inapplicable to bona fide labor unions. This exception, the court said, protects unions in their lawful endeavors to secure the interests of working men by agreements with respect to wages, hours, or other conditions of labor. However, it does not protect union contracts fixing prices "under the guise of increasing wages or regulating working conditions."

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[3] *Fur Workers Union* v. *Fur Workers Union, Local No. 72* (308 U. S. 522); see also 105 Fed. (2d) 1.

[4] *Manhattan Storage & Warehouse Co.* v. *Movers & Warehousemen's Ass'n.* (28 N. Y. Supp. (2d) 594).

State Court May Not Enforce Order of National Labor Relations Board

The Texas Court of Civil Appeals has held that a State court is not empowered to enjoin an employer from disobeying an order of the National Labor Relations Board.[5] In dissolving an injunction which had been issued by a trial court, the higher court declared that the petition for the injunction showed upon its face that the trial court was wholly without any authority or jurisdiction to enter any order with reference to the matter in question, because it involved a construction of the National Labor Relations Act. Moreover, the court said, the act gives exclusive supervision and control of such matters to the Labor Board.

The petition in this case was based on an earlier decision of the National Labor Relations Board, ordering the employer to cease recognizing a union unless or until it was certified as bargaining agent. In spite of the fact that the union had not been certified, the company was negotiating a contract with the union governing the wages, hours, and conditions of employment, and this procedure, it was contended, would deprive employees of their bargaining rights if an agreement were entered into. However, the court pointed out that the National Labor Relations Act confers exclusive power upon the National Labor Relations Board to prevent unfair labor practices. This power necessarily embraces exclusive authority to institute proceedings to restrain any violation of the Board's orders, so that a private individual is not authorized to bring such an action directly before the courts. Furthermore, the Board's proceedings are, for these reasons, to be instituted exclusively in the Federal courts. The trial court, therefore, was wholly without authority to issue an injunction in this case.

Compensation to Dependents May Exceed Past Contributions

A decision concerning an award of compensation to parents partially dependent on a deceased employee was recently rendered by the Superior Court of Pennsylvania.[6] An award of $10 per week for 500 weeks was made to the partially dependent parents, although during the employee's lifetime his contribution to his parents had never exceeded $30 a month. It was contended that such an award was unconstitutional. The court ruled, however, that the only restraint upon the exercise of the legislature's constitutional power to fix the basis of ascertaining compensation is that the rates must be reasonable. The reasonableness of the rates, the court added, is to be determined

[5] *Amalgamated Association of Street Elec. Ry. & Motor Coach Employees* v. *McDowell* (150 SW (2d) 866).
[6] *Zahrobsky* v. *Westmoreland Coal Co.* (21 Atl. (2d) 426).

by the general effect of the statute and not by its effect in an isolated case.

The court agreed that a worker's past contributions to his dependents may be used as evidence as to the reasonableness of the rate of compensation for his death, but held that this rate may be based on some other formula. It was pointed out in this connection that the purpose of the law is to compensate for the probable contributions of the employee to his dependents if he had lived. As it is impossible to adopt any formula which will necessarily produce this result, the legislature has adopted a formula based on the percentage of the earnings. The court found no basis for declaring this formula unreasonable.

Industrial Accidents

CAUSES AND PREVENTION OF INJURIES IN THE MANUFACTURE OF LUMBER PRODUCTS, 1940

By MAX D. KOSSORIS and FRANK S. MCELROY, *Bureau of Labor Statistics*

Summary

A SURVEY by the Bureau of Labor Statistics of the industrial-injury experience of about 120,000 workers in establishments producing furniture and other finished lumber products indicated that during 1940 about 1 worker out of every 22 was disabled because of accidental injury.

Failure to observe simple, and often elementary, safety precautions was the principal cause of these injuries. Fully a third of all the disabling injuries were directly connected with the use of power machinery, such as saws, jointers, shapers, and conveying equipment. The provision and use of properly fixed or self-adjusting guards, the use of jigs for dangerous positions, and the training of workmen in the safe and proper use of machines would have prevented most of these injuries. Better housekeeping, involving the removal of scrap lumber and sawdust from the floor, and the maintenance of a clear working space, would have prevented many injuries resulting from slipping or stumbling over objects. Proper maintenance of hand tools and careful instruction for their use likewise would have prevented numerous injuries. Similarly, safe methods of lifting heavy objects would have avoided many injuries resulting from overexertion.

The fact that good safety records are largely dependent upon such simple measures is emphasized by the wide variations in the experience of different establishments. A considerable number of the plants included in the survey were accident-free throughout the year, while other comparable establishments reported numerous accidents. Illustrating the great differences between individual establishments, 3 plants manufacturing wooden containers, each with 400 or more employees, had injury-frequency rates of 22.0, 104.9, and 105.9, respectively.

Contrary to the general belief that large plants are safest, and small plants the worst injury offenders, the survey indicated that in both the furniture and wooden-container manufacturing groups, injury fre-

quency was higher for the large plants than for the small plants. No direct relationship between injury frequency and establishment size was apparent for plants manufacturing miscellaneous wooden products.

Of the 1,426 establishments covered in the survey, 934 plants with about 82,500 employees produced furniture. Another 296 plants with about 25,000 employees produced wooden containers, and 196 plants with about 13,000 employees produced a variety of miscellaneous lumber products, including window and door screens, window shades, venetian blinds, excelsior, matches, lasts and related products, mirror and picture frames, etc.

TABLE 1.—*Summary of Injury Data for 1,426 Establishments Manufacturing Furniture, Wooden Containers, and Miscellaneous Lumber Products, 1940.*

Item	Furniture	Wooden containers	Miscellaneous lumber products
Number of establishments reporting	934	296	196
Average number of employees	82,530	25,224	12,865
Total employee-hours worked	160,077,790	48,097,124	25,736,876
Frequency rate (average number of disabling injuries per million hours worked)	18.55	37.34	24.21
Severity rate (average number of days lost per thousand hours worked)	2.15	3.54	2.62
Disability distribution, per thousand injuries:			
Death and permanent-total disability	4	5	3
Permanent-partial disability	101	57	66
Temporary-total disability	895	938	931
Average time loss per disabling injury: [1]			
Permanent-partial disability	802	888	1,110
Temporary-total disability	14	15	17

[1] Each death or permanent-total disability is charged at 6,000 days.

Most hazardous of the three manufacturing groups was the one producing wooden containers. The workers in this group experienced 37.3 disabling injuries for every million hours worked. The miscellaneous lumber products group ranked second in frequency of injuries, with 24.2 for every million hours worked. The furniture group was the least hazardous of the three, with a frequency rate of 18.6.

The furniture group, however, had by far the heaviest proportion of permanent impairments. Out of 2,970 injuries, 300 were of a permanent nature and 10 were fatal. Most of the impairments involved the loss of 1 or more fingers, usually through contact with power saws and other power-cutting equipment. Out of every 1,000 injuries in this industry, 4 resulted in death, 101 in permanent impairment, and 895 in temporary disability averaging about 14 days of lost time each. Out of every 10 injuries, at least 1 resulted in permanent impairment.

The miscellaneous lumber products group experienced 2 deaths and 41 permanent injuries out of a total of 623. In each 1,000 injuries, this group had 3 deaths, 66 permanent impairments, and 931 temporary disabilities with an average duration of 17 days.

The wooden-container group had the worst fatality experience, with 9 deaths out of 1,796 injuries. Permanent-partial impairments totaled

102, and temporary-total disabilities 1,685, with an average time loss of 15 days for each temporary case.

In each of the three industry groups, machines accounted for a large proportion of permanent impairments. In the furniture group, machines were involved in 84 percent of such injuries; in the wooden-container industry the percentage was 77; and in the miscellaneous lumber products group, 73 percent. Shapers, circular saws, and jointers were the outstanding injury-causing machines in the furniture industry. In the wooden-container group power saws—both circular and other types—were most frequently named as causing permanent injury. The same was true for the miscellaneous lumber products group. The most prevalent type of impairment was the loss of one or more fingers.

Accident Types and Agencies

FURNITURE MANUFACTURING

Over three-fourths of all the disabling injuries during 1940 in the furniture-manufacturing establishments surveyed, and 81 percent of all time lost resulted from three general types of accidents. Striking against objects, involving contact with machines, lumber, splinters, nails, etc., alone accounted for 39 percent of all disabling injuries and 52 percent of all time lost. Accidents in which employees were struck by falling, flying, sliding, or moving objects accounted for 24 percent of the injuries and 22 percent of the lost time. Slips and overexertion produced 13 percent of the injuries, but accounted for only 7 percent of the total time lost.

Three other important categories of accidents were being caught in, on, or between machinery, gears, conveying equipment, or other objects, which accounted for 7 percent of all disabling injuries and 9 percent of all time lost; falls from one level to another, causing 3 percent of the injuries and 6 percent of the lost time; and falls on the same level, which resulted in 4 percent of the injuries and 3 percent of all time lost. Slightly over 10 percent of the total number of disabling injuries resulted from other types of accidents, but the time lost because of the resulting injuries amounted to only 2 percent of the total.

Machines constituted the accident agency involved in fully one-third of all injuries. Contact with saws accounted for nearly 10 percent; shapers, jointers, and lathes, for over 8 percent; and sanders and other machines, for over 7 percent. These machine-inflicted injuries constituted nearly two-thirds of all those resulting from accidents of the "striking against" type. None of the machine accidents in this classification resulted in death or permanent-total disability, but a large proportion (30 percent) produced permanent-

partial impairments. This was particularly true in respect to those injuries connected with jointers and shapers, nearly half of which resulted in permanent impairments.

Machines similarly were involved in a considerable proportion of the accidents characterized as "caught in, on, or between," and to a less extent in the group of accidents classified as "struck by moving objects." In each of these groups some of the machine accidents resulted in fatalities.

Hand tools produced the injury in nearly 6 percent of all the disabling cases reported. Comparatively few of the injuries, however, resulted in permanent disability, and none resulted in death.

Falls from one elevation to another accounted for only about 3 percent of the injuries reported; but 1 permanent-total disability and 2 of the 10 fatalities reported by the furniture-manufacturing establishments resulted from this type of accident. Falls on the same level were slightly more numerous, 4 percent, but none of these were fatal and few involved permanent-partial disability.

Most of the 393 injuries resulting from "slips and overexertion" were temporary in nature. Nevertheless, two of the reported deaths were charged to this type of accident.

WOODEN-CONTAINER MANUFACTURING

Ninety percent of the total time lost and 73 percent of the total number of industrial injuries experienced in the manufacture of wooden containers were chargeable to three general types of accidents. Accidents of the "striking against" type accounted for 34 percent of the disabling injuries and 47 percent of the lost time. The "struck by" type of accident accounted for 30 percent of the injuries and 22 percent of the lost time. Accidents of the "caught in, on, or between" type produced only 9 percent of the injuries, but were responsible for 21 percent of the total time lost.

Three more types of accidents were responsible for comparatively large numbers of injuries, but on the average the injuries chargeable to these accidents were less severe. Slips and overexertion accounted for nearly 10 percent of all injuries, but for only slightly over 2 percent of the time lost. Falls on the same level were charged with over 5 percent of the total number of injuries, but the time lost amounted to only 1.5 percent of the total. Falls from one elevation to another accounted for 3 percent of the injuries and 1 percent of the lost time.

Machines were involved in about one-third of all the injuries reported by the establishments manufacturing wooden containers. Saws caused 12 percent of all injuries. Striking against shapers, lathes, jointers, sanders, and miscellaneous machines accounted for another 8 percent. Kick-backs from machines accounted for about 5 percent, and being caught in, on, or between machinery, gears, or

conveying equipment accounted for 7 percent. Although representing only a third of the total number of injuries, machines caused 5 of the 9 deaths and 83 of the 102 permanent-partial disabilities. Because of this relatively large number of the more severe disabilities, the lost time charged to machine-inflicted injuries amounted to 62 percent of the time charged to all injuries.

Hand tools were involved in nearly 7 percent of all injuries. Only 3 of the 120 injuries ascribed to this agency, however, were of a permanent nature. The average time lost per temporary disability arising from this source was only 10 days, in comparison with an average of 15 days for all temporary disabilities.

Two deaths, one permanent-partial disability, and 88 temporary-total disabilities were caused by lumber falling from stacks. Together, these cases amounted to 5 percent of all disabling injuries, but, on the basis of severity, they accounted for 10 percent of the total lost time.

MISCELLANEOUS LUMBER PRODUCTS

Injuries occurred more frequently and, on the average, were more serious in the group of establishments engaged in manufacturing miscellaneous lumber products than in those engaged in the production of furniture. On the other hand, both the frequency rate of 24.2 and the severity rate of 2.6 in the manufacture of miscellaneous lumber products were lower than those of the wooden-container manufacturing establishments (37.3 and 3.5, respectively).

Accidents of the "striking against" type accounted for 37 percent of all injuries and 39 percent of all time lost. The "struck by" type of accident accounted for 23 percent of the injuries and 11 percent of the lost time. Slips and overexertion were responsible for 13 percent of the injuries and 8 percent of the lost time. Accidents of the "caught in, on, or between" type accounted for 8 percent of the injuries and 25 percent of the lost time. Together, these four accident types accounted for 81 percent of all injuries and about 84 percent of all time lost. One of the two deaths and 38 of the 41 permanent partial disabilities chargeable to all causes were ascribed to accidents of these types.

As in the manufacturing of furniture and wooden containers, machines constituted the leading source of injury, accounting for 34 percent of all injuries and 44 percent of all lost time. In the "striking against" category of accidents, saws alone were involved in 12 percent of all injuries, resulting in 22 percent of all lost time. Shapers, lathes, jointers, and sanders were the agencies in 7 percent of all injuries, while miscellaneous machines were involved in another 6 percent.

Being caught in, on, or between machinery, gears, or conveying equipment produced 5 percent of all injuries, and kick-backs from machines accounted for another 4 percent.

TABLE 2.—*Injury Rates, by Type of Accident, for 1,426 Establishments Manufacturing Furniture, Wooden Containers, and Miscellaneous Lumber Products, 1940*

Type of accident	Number of disabling injuries resulting in—			Total injuries		Total days lost		Injury rates	
	Death and permanent-total disability [1]	Permanent-partial disability	Temporary-total disability	Number	Percent	Number	Percent	Frequency	Severity
Furniture, except metal (934 establishments, 82,530 employees, 160,077,790 employee-hours worked)									
All types	(1) 11	299	2,660	2,970	.....	343,810	.....	18.55	2.15
Striking against	0	242	920	1,162	39.3	179,715	52.3	7.26	1.13
Machines	0	228	528	756	25.7	167,225	48.7	4.73	1.06
Circular saws	0	39	70	109	3.7	25,318	7.4	.68	.16
Swing saws	0	5	12	17	.6	7,303	2.1	.11	.05
Band saws	0	16	39	55	1.9	10,501	3.1	.34	.07
Saws, other	0	30	80	110	3.7	25,680	7.5	.69	.16
Shapers	0	75	74	149	5.0	58,388	17.0	.93	.37
Lathes	0	2	7	9	.3	1,845	.5	.06	.01
Jointers	0	32	55	87	2.9	20,038	5.8	.54	.13
Sanders	0	7	53	60	2.0	3,275	1.0	.37	.02
Machines, miscellaneous	0	22	138	160	5.6	14,877	4.3	1.01	.09
Lumber	0	0	28	28	.9	333	.1	.17	(2)
Splinters	0	8	159	167	5.6	6,881	2.0	1.04	.04
Nails	0	3	61	64	2.2	2,040	.6	.40	.01
Other objects	0	3	144	147	4.9	3,236	.9	.92	.02
Struck by	5	27	666	698	23.5	74,406	21.6	4.36	.46
Hand tools	0	5	169	174	5.9	12,087	3.5	1.09	.08
Chisels	0	1	52	53	1.8	2,193	.6	.33	.01
Wrenches	0	0	3	3	.1	32	(3)	.02	(2)
Hammers	0	1	42	43	1.4	954	.3	.27	.01
Others	0	3	72	75	2.6	8,908	2.6	.47	.06
Kick-backs from machines	3	10	95	108	3.6	33,284	9.7	.67	.20
Lumber falling from stacks, piles, etc	0	1	76	77	2.6	1,350	.4	.48	.01
Lumber, other than falling	0	1	46	47	1.6	778	.2	.29	(2)
Motor vehicles	1	0	8	9	.3	6,182	1.8	.06	.04
Vehicles, hand or foot operated	0	0	33	33	1.1	425	.1	.21	(2)
Other objects	1	10	239	250	8.4	20,300	5.9	1.56	.13
Caught in, on, or between	1	19	180	200	6.7	31,135	9.1	1.25	.19
Machinery	1	13	78	92	3.1	23,116	6.8	.58	.14
Gears	0	0	7	7	.2	139	(3)	.04	(2)
Conveying equipment	0	1	33	34	1.1	900	.3	.21	.01
Other objects	0	5	62	67	2.3	6,980	2.0	.42	.04
Falls—one elevation to another	(1) 3	0	84	87	2.9	20,020	5.8	.54	.13
Falls—on same level	0	3	124	127	4.3	9,271	2.7	.79	.06
Stumbling over objects	0	3	83	86	2.9	8,721	2.5	.53	.06
Other	0	0	41	41	1.4	550	.2	.26	(2)
Slips and overexertion	2	3	388	393	13.2	22,281	6.5	2.46	.14
Inhalation, absorption, ingestion	0	0	28	28	.9	366	.1	.17	(2)
Contact with extreme temperature	0	0	22	22	.7	212	.1	.14	(2)
Contact with electric current	0	0	9	9	.3	95	(3)	.06	(2)
All other types	0	5	239	244	8.2	6,309	1.8	1.52	.04
Wooden containers (296 establishments, 25,224 employees, 48,097,124 employee-hours worked)									
All types	9	102	1,685	1,796	.....	170,051	.....	37.34	3.54
Striking against	3	69	547	619	34.4	80,355	47.3	12.87	1.68
Machines	2	66	301	369	20.5	69,160	40.8	7.67	1.45
Circular saws	0	22	73	95	5.3	16,219	9.5	1.98	.34
Swing saws	0	1	5	6	.3	447	.3	.12	.01
Band saws	0	4	13	17	.9	4,729	2.8	.35	.10
Saws, other	0	18	84	102	5.7	19,170	11.3	2.12	.40
Shapers	0	1	4	5	.3	1,909	1.1	.10	.04
Lathes	0	2	9	11	.6	2,513	1.5	.23	.05
Jointers	0	1	3	4	.2	413	.2	.08	.01
Sanders	0	2	2	4	.2	652	.4	.08	.01
Machines, miscellaneous	2	15	108	125	7.0	23,108	13.7	2.60	.49

See footnotes at end of table.

TABLE 2.—*Injury Rates, by Type of Accident, for 1,426 Establishments Manufacturing Furniture, Wooden Containers, and Miscellaneous Lumber Products, 1940*—Con.

Type of accident	Number of disabling injuries resulting in—			Total injuries		Total days lost		Injury rates	
	Death and permanent-total disability [1]	Permanent-partial disability	Temporary-total disability	Number	Percent	Number	Percent	Frequency	Severity
Wooden containers (296 establishments, 25,224 employees, 48,097,124 employee-hours worked)—Continued									
Striking against—Continued.									
Lumber	1	0	27	28	1.6	6,369	3.7	0.58	0.13
Splinters	0	1	75	76	4.2	2,603	1.5	1.58	.05
Nails	0	0	51	51	2.8	510	.3	1.06	.01
Other objects	0	2	93	95	5.3	1,713	1.0	1.98	.04
Struck by	2	10	526	538	30.0	37,401	22.0	11.19	.78
Hand tools	0	3	117	120	6.7	6,162	3.6	2.49	.13
Chisels	0	0	7	7	.4	61	(2)	.15	(2)
Wrenches	0	1	8	9	.5	828	.5	.19	.02
Hammers	0	0	13	13	.7	135	.1	.27	(2)
Others	0	2	89	91	5.1	5,138	3.0	1.88	.11
Kick-backs from machines	0	2	83	85	4.7	4,841	2.8	1.77	.10
Lumber falling from stacks, piles, etc	2	1	88	91	5.1	17,297	10.3	1.89	.36
Lumber, other than falling	0	0	44	44	2.4	899	.5	.91	.02
Motor vehicles	0	0	7	7	.4	75	(2)	.15	(2)
Vehicles, hand or foot operated	0	0	69	69	3.8	473	.3	1.43	.01
Other objects	0	4	118	122	6.9	7,654	4.5	2.53	.16
Caught in, on, or between	3	16	146	165	9.2	35,745	21.0	3.43	.74
Machinery	2	11	79	92	5.1	22,816	13.4	1.91	.48
Gears	0	2	3	5	.3	1,092	.6	.10	.02
Conveying equipment	1	2	29	32	1.8	7,448	4.4	.67	.15
Other objects	0	1	35	36	2.0	4,389	2.6	.75	.09
Falls—one elevation to another	0	0	60	60	3.3	1,641	1.0	1.25	.03
Falls—on same level	0	3	96	99	5.5	2,634	1.5	2.06	.05
Stumbling over objects	0	2	54	56	3.1	1,658	.9	1.17	.03
Other	0	1	42	43	2.4	976	.6	.89	.02
Slips and overexertion	0	3	167	170	9.5	4,024	2.4	3.53	.08
Inhalation, absorption, ingestion	0	0	14	14	.8	166	.1	.29	(2)
Contact with extreme temperature	0	0	27	27	1.5	752	.4	.56	.02
Contact with electric current	1	0	3	4	.2	6,022	3.5	.08	.13
All other types	0	1	99	100	5.6	1,311	.8	2.08	.03
Miscellaneous lumber products (196 establishments, 12,865 employees, 25,736,876 employee-hours worked)									
All types	2	41	580	623	.....	67,341	.....	24.21	2.62
Striking against	0	27	202	229	36.6	25,791	38.5	8.90	1.00
Machines	0	26	129	155	24.8	21,890	32.7	6.02	.85
Circular saws	0	10	26	36	5.8	9,237	13.9	1.40	.36
Swing saws	0	1	1	2	.3	369	.5	.08	.01
Band saws	0	0	5	5	.8	49	.1	.19	(2)
Saws, other	0	7	23	30	4.8	5,277	7.8	1.17	.21
Shapers	0	4	10	14	2.2	4,122	6.1	.54	.16
Lathes	0	0	6	6	1.0	62	.1	.23	(2)
Jointers	0	1	3	4	.6	379	.6	.16	.01
Sanders	0	1	18	19	3.0	460	.7	.74	.02
Machines, miscellaneous	0	2	37	39	6.3	1,935	2.9	1.51	.08
Lumber	0	0	13	13	2.1	298	.4	.51	.01
Splinters	0	0	20	20	3.2	169	.3	.78	.01
Nails	0	0	9	9	1.4	45	.1	.35	(2)
Other objects	0	1	31	32	5.1	3,389	5.0	1.24	.13
Struck by	0	4	141	145	23.3	7,703	11.4	5.63	.30
Hand tools	0	1	15	16	2.6	494	.7	.62	.02
Chisels	0	1	1	2	.3	301	.5	.08	.02
Wrenches	0	0	2	2	.3	13	(2)	.08	(2)
Hammers	0	0	4	4	.6	83	.1	.16	(2)
Others	0	0	8	8	1.4	97	.1	.30	(2)

See footnotes at end of table.

TABLE 2.—*Injury Rates, by Type of Accident, for 1,426 Establishments Manufacturing Furniture, Wooden Containers, and Miscellaneous Lumber Products, 1940*—Con.

Type of accident	Number of disabling injuries resulting in—			Total injuries		Total days lost		Injury rates	
	Death and permanent-total disability [1]	Permanent-partial disability	Temporary-total disability	Number	Percent	Number	Percent	Frequency	Severity
	Miscellaneous lumber products (196 establishments, 12,865 employees, 25,736,876 employee-hours worked)—Con.								
Struck by—Continued.									
Kick-backs from machines	0	1	26	27	4.3	889	1.3	1.05	0.03
Lumber falling from stacks, piles, etc	0	1	29	30	4.8	863	1.3	1.17	.03
Lumber, other than falling	0	0	16	16	2.6	360	.5	.62	.01
Motor vehicles	0	0	2	2	.3	36	.1	.08	(2)
Vehicles, hand or foot operated	0	0	18	18	2.9	241	.4	.70	.01
Other objects	0	1	35	36	5.8	4,820	7.1	1.39	.20
Caught in, on, or between	1	6	42	49	7.9	16,968	25.2	1.90	.66
Machinery	0	3	18	21	3.4	5,879	8.7	.82	.23
Gears	0	1	6	7	1.1	410	.6	.27	.02
Conveying equipment	0	0	5	5	.8	118	.2	.19	(2)
Other objects	1	2	13	16	2.6	10,561	15.7	.62	.41
Falls—one elevation to another	1	1	18	20	3.2	8,716	12.9	.78	.34
Falls—on same level	0	1	38	39	6.3	1,172	1.7	1.52	.05
Stumbling over objects	0	1	30	31	5.0	921	1.3	1.21	.04
Other	0	0	8	8	1.3	251	.4	.31	.01
Slips and overexertion	0	1	81	82	13.2	5,684	8.4	3.19	.22
Inhalation, absorption, ingestion	0	0	6	6	1.0	97	.1	.23	(2)
Contact with extreme temperature	0	0	14	14	2.2	203	.3	.54	.01
Contact with electric current	0	0	1	1	.2	10	(3)	.04	(2)
All other types	0	1	37	38	6.1	997	1.5	1.48	.04

[1] Figures in parentheses show the number of cases of permanent-total disability included.
[2] Less than 0.005.
[3] Less than 0.05.

Falls on level surfaces produced over 6 percent of all injuries. Generally, however, these injuries were of less serious nature, resulting in only about 2 percent of all lost time. Falls from one elevation to another were somewhat less numerous, accounting for only 3 percent of all injuries, but caused one death.

Although lumber falling from stacks produced nearly 5 percent of all injuries, only about 1 percent of all time lost was chargeable to this cause. Injuries resulting from being struck by hand tools occurred less frequently and were also less severe in the manufacture of miscellaneous lumber products than in the manufacture of furniture or wooden containers.

Injury Experience by Size of Establishments

FURNITURE MANUFACTURING

Nearly half (461) of all the furniture-manufacturing establishments reporting had no disabling injuries during 1940. In the main these were the smaller firms, although 27 establishments, each having an

average of 100 to 199 employees, and 6 having from 200 to 299 employees, were included in this group.

Generally, the relative frequency of disabling injuries varied directly with the volume of employment. The establishments in the smallest-size group (1 to 24 employees) averaged the lowest frequency rate, 12.7 injuries per million employee-hours worked, while the establishments having from 200 to 299 employees had the highest frequency rate, 21.8. Each of the size groups in which employment averaged under 100 had a frequency rate lower than that for the entire group, and each of the groups with employment of 100 or more had frequency rates greater than the general rate.

WOODEN-CONTAINER MANUFACTURING

In the wooden-container group only about 29 percent of the establishments achieved a perfect record of no disabling injuries during 1940. As in furniture manufacturing, these establishments were mainly those having the smaller number of employees.

The lowest frequency rate for the various size groups, 26.2, was that of establishments with 25 to 49 employees. The establishments of the smallest size (1 to 24 employees) had a slightly higher frequency rate, 26.4, but with this exception the frequency rates for the different size groups varied directly with the size of establishment as measured by average employment. It is noteworthy that each of the size groups composed of establishments having less than 200 employees had frequency rates that were lower than the average frequency rate for all establishments manufacturing wooden containers, and that the establishments having from 200 to 399 employees had a frequency rate identical with the general rate. The group of larger firms (400 or more employees), however, had a frequency rate more than double that of the industry as a whole. This latter group was composed of three establishments, one of which had a frequency rate of 22.0, while the other two had rates of 104.9 and 105.9, respectively.

MISCELLANEOUS LUMBER PRODUCTS

Slightly more than 42 percent of the establishments manufacturing miscellaneous lumber products reported no disabling injuries to employees during 1940, but only one of these establishments had more than 100 employees. In the smallest-size group (1 to 24 employees) nearly 78 percent of the reporting establishments had no injuries.

The frequency rates for the various size groups of miscellaneous lumber-products establishments bore no definite relationship to the size of the plants. The 4 establishments of the largest size (400 or more employees) had the lowest average frequency rate, 15.6, and the 8 establishments with 200 to 299 employees had the highest rate, 36.8. The establishments of the smallest size (1 to 24 employees) had

the next to lowest average rate, 17.3, but the third lowest rate applied to establishments having from 100 to 199 employees.

TABLE 3.—*Distribution of Disabling Injuries in Establishments Manufacturing Furniture, Wooden Containers, and Miscellaneous Lumber Products, by Size of Establishment, 1940*

Industry and classified number of employees	Total number of establishments	Establishments with classified number of injuries							Total number of employees	Total employee-hours worked (thousands)	Total number of disabling injuries	Injury frequency rate
		None	1–5	6–10	11–20	21–30	31–40	41 or more				
Furniture (except metal)	934	461	325	81	41	10	9	7	82,530	[1] 160,078	2,970	18.55
1 to 24	326	261	64	1	0	0	0	0	3,959	7,463	95	12.73
25 to 49	190	102	84	4	0	0	0	0	6,740	12,826	190	14.81
50 to 99	167	65	89	13	0	0	0	0	11,785	23,157	320	13.82
100 to 199	157	27	70	40	17	3	0	0	21,950	42,840	820	19.14
200 to 399	59	6	12	19	14	3	4	1	15,632	30,471	665	21.82
400 or more	35	0	6	4	10	4	5	6	22,464	43,322	880	20.31
Wooden containers	296	87	118	48	23	14	3	3	25,224	[1] 48,097	1,796	37.34
1 to 24	71	46	24	1	0	0	0	0	932	1,667	44	26.39
25 to 49	72	18	52	2	0	0	0	0	2,554	4,690	123	26.22
50 to 99	66	16	24	21	5	0	0	0	4,803	9,073	281	30.97
100 to 199	58	5	16	19	11	6	1	0	8,113	15,596	543	34.82
200 to 399	26	2	2	5	7	7	2	1	6,795	12,937	483	37.34
400 or more	3	0	0	0	0	1	0	2	2,027	4,135	322	77.88
Miscellaneous lumber products	196	83	79	20	8	4	2	0	12,865	[1] 25,737	623	24.21
1 to 24	77	60	17	0	0	0	0	0	827	1,497	26	17.37
25 to 49	41	12	28	1	0	0	0	0	1,489	2,940	71	24.15
50 to 99	47	10	27	8	1	1	0	0	3,305	6,851	173	25.25
100 to 199	19	1	7	10	1	0	0	0	2,564	5,015	114	22.73
200 to 399	8	0	0	1	4	1	2	0	2,102	4,318	159	36.83
400 or more	4	0	0	0	2	2	0	0	2,578	5,117	80	15.63

[1] Totals based on unrounded data.

Types of Permanent-Partial Injuries

FURNITURE MANUFACTURING

The 934 furniture-manufacturing establishments reported a total of 299 injuries resulting in permanent-partial disabilities. Of these, 257, or 86 percent, involved the loss of one or more fingers; 13 involved the loss of an entire hand; and 4 involved the loss of an arm. Permanent injuries to other parts of the body were much less frequent, but 12 workers each lost an eye, 4 each lost a foot, 2 each lost a leg, and 1 lost a great toe.

Most permanent injuries to fingers resulted from contact with cutting machines, power saws alone being involved in 81 cases. Shapers were involved in 71 finger amputations and jointers in 32 more. Ten of the 13 injuries resulting in the loss of a hand similarly involved contact with the cutting edges of saws or shapers. Only 1 of the 4 cases resulting in the loss of an arm arose from contact with a cutting machine, but in 2 instances the loss of an arm resulted from being caught in, on, or between other machinery.

Ten of the 12 injuries resulting in the loss of an eye were ascribed to accidents of the "struck by" type, kick-backs from machines being specifically responsible in 3 instances. Because of the small number of permanent impairments involving the foot, leg, or ear, their distribution cannot be considered particularly significant, other than that their relative scarcity emphasizes the often-heard comment that a mutilated hand is the typical mark of service in the woodworking industry.

WOODEN-CONTAINER MANUFACTURING

Permanent-partial impairments were reported for 102 workers by the 296 establishments engaged in the manufacture of wooden containers. Of these, 82, or 80 percent, involved the loss of one or more fingers. The other major types of disability included 7 cases involving loss of an eye; 3 involving loss of a hand; 1 involving loss of an arm; 2 involving loss of a foot; and 2 involving loss of a leg.

Forty amputations of 1 or more fingers resulted from striking against power saws. Although shapers, jointers, lathes, and sanders are not as widely used in the manufacture of containers as in the furniture industry, contact with these power tools resulted in 6 finger amputations. Striking against other unclassified machines resulted in 14 additional cases of lost fingers. Fourteen workers each lost 1 or more fingers through becoming caught in, on, or between machinery, gears, or conveying equipment.

All of the 3 cases involving the loss of a hand resulted from contact with machines, saws being the agency in 2 instances. All but one of the 7 lost-eye cases resulted from accidents of the "struck by" type, kick-backs from machines being responsible in 2 instances.

MISCELLANEOUS LUMBER PRODUCTS

Altogether, 41 cases of permanent-partial disability were reported by the 196 establishments manufacturing miscellaneous lumber products. Of these, 33 consisted of the loss of 1 or more fingers; 3 involved the loss of a leg; and 3 were, respectively, the loss of a hand, a foot, and an arm.

As in the manufacture of furniture and wooden containers, the larger part of the finger amputations resulted from contact with power-cutting machines. Saws were involved in 18 of the 33 cases, and shapers, jointers, and sanders in 6 cases. Being caught in, on, or between machinery or gears resulted in 3 cases of lost fingers.

TABLE 4.—*Distribution of Reported Permanent-Partial-Disability Injuries, by Part of Body Affected and Type of Accident, in Establishments Manufacturing Furniture, Wooden Coutainers, and Miscellaneous Lumber Products, 1940*

Industry and accident type	Total number of cases	Number of permanent-partial-disability cases involving loss or loss of use of—							
		Arm or hand	Leg or foot	1 thumb	1 finger	2 or more fingers	Thumb and 1 or more fingers	1 eye	Other
Furniture	299	17	6	42	143	64	8	12	7
Striking against	242	11	1	34	125	60	8	1	2
Machines	228	11	0	29	118	59	8	1	2
Saws	90	7	0	12	48	16	5	0	2
Shapers, lathes, jointers, or sanders	116	4	0	14	58	37	3	0	0
Miscellaneous	22	0	0	3	12	6	0	1	0
Splinters	8	0	1	3	4	0	0	0	0
Nails	3	0	0	1	1	1	0	0	0
Other objects	3	0	0	1	2	0	0	0	0
Struck by	27	2	2	5	5	1	0	10	2
Hand tools	5	0	2	1	0	0	0	2	0
Kick-backs from machines	10	2	0	1	2	1	0	3	1
Lumber falling from stacks, piles, etc	1	0	0	0	0	0	0	0	1
Lumber, other than falling	1	0	0	0	1	0	0	0	0
Other objects	10	0	0	3	2	0	0	5	0
Caught in, on, or between	19	4	0	2	10	2	0	0	1
Machinery	13	3	0	1	7	1	0	0	1
Conveying equipment	1	0	0	0	1	0	0	0	0
Other objects	5	1	0	1	2	1	0	0	0
Falls—on same level	3	0	2	0	0	0	0	0	1
Stumbling over objects	3	0	2	0	0	0	0	0	1
Slips and overexertion	3	0	1	0	1	0	0	0	1
All other types	5	0	0	1	2	1	0	1	0
Wooden containers	102	4	4	16	41	19	6	7	5
Striking against	69	3	1	12	30	15	6	1	1
Machines	66	3	1	12	28	15	6	0	1
Saws	45	2	1	7	16	13	5	0	1
Shapers, lathes, jointers, or sanders	6	0	0	1	3	2	0	0	0
Miscellaneous	15	1	0	4	9	0	1	0	0
Splinters	1	0	0	0	0	0	0	1	0
Other objects	2	0	0	0	2	0	0	0	0
Struck by	10	0	2	0	1	1	0	6	0
Hand tools	3	0	1	0	0	1	0	1	0
Kick-backs from machines	2	0	0	0	0	0	0	2	0
Lumber falling from stacks, piles, etc	1	0	1	0	0	0	0	0	0
Other objects	4	0	0	0	1	0	0	3	0
Caught in, on, or between	16	1	1	4	7	3	0	0	0
Machinery	11	1	0	3	5	2	0	0	0
Gears	2	0	0	0	1	1	0	0	0
Conveying equipment	2	0	0	1	1	0	0	0	0
Other objects	1	0	1	0	0	0	0	0	0
Falls—on same level	3	0	0	0	2	0	0	0	1
Stumbling over objects	2	0	0	0	1	0	0	0	1
Other	1	0	0	0	1	0	0	0	0
Slips and overexertion	3	0	0	0	0	0	0	0	3
All other types	1	0	0	0	1	0	0	0	0
Miscellaneous lumber products	41	2	4	1	15	15	2	0	2
Striking against	27	1	0	1	9	14	2	0	0
Machines	26	0	0	1	9	14	2	0	0
Saws	18	0	0	0	7	9	2	0	0
Shapers, lathes, jointers, or sanders	6	0	0	1	2	3	0	0	0
Miscellaneous	2	0	0	0	0	2	0	0	0
Other objects	1	1	0	0	0	0	0	0	0
Struck by	4	0	1	0	1	0	0	0	2
Hand tools	1	0	0	0	1	0	0	0	0
Kick-backs from machines	1	0	0	0	0	0	0	0	1
Lumber falling from stacks, piles, etc	1	0	0	0	0	0	0	0	1
Other objects	1	0	1	0	0	0	0	0	0
Caught in, on, or between	6	0	2	0	3	1	0	0	0
Machinery	3	0	1	0	1	1	0	0	0
Gears	1	0	0	0	1	0	0	0	0
Other objects	2	0	1	0	1	0	0	0	0
Falls—one elevation to another	1	0	1	0	0	0	0	0	0
Falls—on same level	1	0	0	0	1	0	0	0	0
Stumbling over objects	1	0	0	0	1	0	0	0	0
Slips and overexertion	1	1	0	0	0	0	0	0	0
All other types	1	0	0	0	1	0	0	0	0

Causes and Prevention of Accidents

A considerable number of reporting establishments complied with the Bureau's request for brief descriptions of their serious accidents. A large number of these descriptions were sufficiently detailed to permit an analysis of the unsafe conditions or unsafe acts which made these accidents possible. As is apparent from the suggestions which follow the descriptions of the accidents below, the safety rules violated were often of a very common-sense, nontechnical character. Similarly, the lack of proper guards on power-cutting machinery was inexcusable.

DESCRIPTION OF ACCIDENTS AND METHODS OF PREVENTION [1]

Furniture Manufacturing

1. Operator was running small piece through jointer. It kicked back and his finger slipped into the knife. One finger was amputated.

Jigs should be used in jointing small pieces.

2. Operator of circular saw was struck on the head and killed by a piece of lumber kicked back by the saw.

Machine should be properly guarded to prevent kick-backs. The saw should be kept sharp, and the operator be instructed and required to stand at the side of the board and not in front of it.

3. Workman was straightening a tangled coil of wire. An end of the wire sprung from the coil and punctured his eye, causing loss of eyesight.

Safety goggles should always be worn when working with wire.

4. Shaper operator's hand slipped into knives. One finger was amputed.

Knives should be guarded and jigs should be used to hold the work.

5. Operator of rip saw crawled underneath to oil the mechanism while the saw was in motion. His arm touched the saw and was nearly severed.

Men should not be permitted to oil equipment while it is in motion.

6. Employee was standing by a veneer lathe talking to the operator. He moved his hand into contact with the lathe gear and lost three fingers.

All gears should be enclosed.

7. Operator of drum sander kicked steel conveyor belt. His foot caught and was pulled under a pulley.

All belts and pulleys should be enclosed. Men should not be permitted to adjust equipment while it is in motion.

8. Laborer was opening a crate of compressed springs, using pliers to cut the binding wire. The released springs threw the pliers, which struck his eye.

Safety goggles should always be worn when working with compressed springs. Usually long-handled cutters can be used.

9. Operator of disk sander lost his footing and struck both index fingers against the revolving disk. The ends of both fingers were sanded off.

Floors should have antislip surface and should be kept clear of sawdust and waste.

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[1] In the analysis of these accidents, selected as typical of those reported, the authors had the assistance of R. P. Blake, Senior Safety Engineer of the Division of Labor Standards, U. S. Department of Labor. The analysis was made from cards to which the descriptions of accidents had been transcribed so as not to reveal the identity of reporting establishments.

10. Saw counterweight fell, striking the operator and causing him to fall onto the saw. His hand was amputated.

A proper self-adjusting hood guard should be provided for all circular saws. Counterweights should be chained or securely through-pinned.

11. Four employees were removing logs from veneer log-boiling vat. A log had been hoisted from the vat and hung suspended from the hoist beam. In attempting to swing the log onto the platform, one worker slipped and fell into the vat of hot water. Death resulted from the scalding.

Toeboards and railings or fences should enclose all vats.

Wooden Containers

1. An inexperienced operator attempted to change the speed of a band saw by using a stick to shift the belt while the saw was in motion. The stick broke throwing his hand against the saw. The thumb and four fingers were amputated.

Men should not be permitted to adjust equipment while it is in motion. The belt and saw should be enclosed.

2. Operator of rip saw brought his left hand into contact with saw. The thumb and part of first finger were amputated.

A proper self-adjusting hood guard should be provided for all circular saws.

3. Employee was cleaning out dust-suction pipe when his hand struck circular saw. A thumb and two fingers were amputated.

Men should not be permitted to clean or adjust equipment while it is in motion.

4. Operator of circular saw was ripping veneer ends. The ends stuck and the operator pushed harder. When the ends suddenly released, the operator's left hand was pulled into the saw. One finger was amputated.

A proper self-adjusting hood guard should be provided for all circular saws. The operator should have been better trained. A properly ground, properly set saw does not refuse the cut unless badly overfed.

5. The operator of a circular rip saw was cutting narrow cleats. His hand slipped into the saw and three fingers were amputated.

A proper self-adjusting hood guard should be provided for all circular saws.

6. A laborer was cutting rollers to length. He looked away from the work, but continued his operations. In so doing he pushed his hand into the saw. A thumb and two fingers were amputated.

A proper self-adjusting hood guard should be provided for all circular saws.

7. Operator of circular saw was ripping a piece of board. A splinter flew back, striking operator in the eye, causing loss of sight.

An enclosing hood guard and spreader would practically eliminate splinters. Goggles should be worn on work likely to throw splinters or sawdust.

8. Man piling lumber struck an adjacent stack of lumber, which fell upon him inflicting fatal injuries.

Men should be instructed in the proper methods of piling lumber so that it may not easily be dislodged.

9. Worker was putting belt on pulley. His clothing caught and he was wound around the shaft. He fractured his skull, both legs, and one arm, and the other arm was torn off below the elbow.

Men should not be permitted to adjust equipment while it is in motion. The necessity of putting belts off and on by hand should be eliminated by the use of clutches or idler pulleys equipped with shifters.

10. Operator of gang saw was bending over to pick up material. His hand slid into the feeds and two fingers were amputated.

Feeds should be properly guarded.

Miscellaneous Lumber Products

1. Superintendent of mill was investigating a squeak in the dry-kiln machinery. He climbed into a pit under the kiln while the machinery was in motion, striking his knee against the blades of the electric fan. Permanent-partial disability resulted.

This superintendent violated a fundamental rule of good safety practice—adjustments to equipment should not be permitted while the equipment is in motion.

2. Man was using a chisel with a mushroomed head. A piece of steel sliver entered hand between first and second fingers, resulting in serious infection.

Chisel head should have been kept dressed. Adequate first-aid should have been given even though the injury may have appeared very slight at first.

3. While guiding piling being lifted by a crane, worker's hand became caught between piling and tram rail, resulting in the permanent crippling of a finger.

Material being lifted should never be guided by hand. A guide rope or pike pole should be used.

4. Operator was attempting to release a jammed saw. His hand slipped into the saw and the ends of four fingers were amputated.

Men should not be permitted to adjust equipment until the power has been shut off. In this case the operator apparently was not well trained. A properly fed saw, in proper condition, should not jam.

5. Operator was shaping some thin material. His right hand slipped off the edge of the pattern into the shaper head. Two fingers were amputated.

Shapers should be equipped with a guard at height to pass the material, but extending beyond the sweep of the knives, to lessen the chance of finger contact. Jigs should be used on all small or narrow work to keep hands away from the knives.

6. Operator of saw reached to pick up boards. His hand struck the saw and two fingers were amputated.

A proper self-adjusting hood guard should be provided for all circular saws.

7. Laborer was picking bark out from under the knife of a veneer machine. His fingers caught between the knife and the log. One finger was amputated.

Men should not be permitted to clean or adjust equipment while it is in motion.

8. Operator started to put dust board in front of bolter saw. The board caught on the saw and his hand was pulled into the saw. Three fingers were amputated.

Men should not be permitted to adjust equipment while it is in motion.

9. Man standing on second floor, pulled cable of elevator, starting it up from the first floor. As it reached the second floor, he attempted to jump aboard, but was caught between the moving elevator and the wall. He was seriously crushed and died shortly after.

All elevators should be equipped with safety gates.

10. Operator of circular saw was cutting short dowels. His hand struck the saw and two fingers were amputated.

A proper self-adjusting hood guard should be provided for all circular saws. Jigs should be used when cutting small pieces.

INDUSTRIAL INJURIES IN THE MINERAL INDUSTRIES, 1940 [1]

PRELIMINARY reports received by the United States Bureau of Mines indicate that approximately 1,690 men were killed and 78,550 were injured at their work in the mineral industries [2] of the United States during 1940. These figures represent about 1.3 deaths and 60.3 nonfatal injuries for each million man-hours worked during the year.

Injuries, both fatal and nonfatal, in the mineral industries were more numerous in 1940 than in 1939, but the total increase was proportionately smaller than the gain in man-hours worked. On the basis of exposure to injury, therefore, the frequency rate for all disabling injuries declined from 65.7 in 1939 to about 61.6 in 1940.

In comparison with the experience of other years in the decade ending with 1940, the estimated rate of 1.3 fatalities per million man-hours worked is higher than that for 1939, and is lower than the rates for 1931 and 1932. In the other years of the period the fatality rates corresponded closely with that of 1940. The estimated frequency rate of nonfatal injuries (60.3) for 1940, however, is lower than that of any other year in the decade.

Anthracite mining, gold and silver mining, and miscellaneous metal mining with 1940 injury frequency rates of 107.4, 106.4, and 80.2, respectively, were the most hazardous of the included operations in both 1939 and 1940. Employment figures for 1940 indicate that both the number of employees and the total man-hours worked probably increased in 17 of the 21 groups of mineral operations for which separate figures were compiled. The number of injuries, on the other hand, increased in only 14 of the 21 groups of operations.

ACCIDENT COMPENSATION FOR TRAINEES IN CANADA

ON JUNE 25, 1941, the provisions of the Canadian Government Employees' Compensation Act were made applicable to persons being trained under the War Emergency Training Program.[3]

Trainees are not employees of private establishments and do not receive any salary or wages while they are being trained. As a consequence they could not, before this measure was passed, be paid acci-

[1] Data are from United States Bureau of Mines: Employment and Accidents in the Mineral Industries, by W. W. Adams, Washington, 1941.

[2] Includes coal mines, metal mines, nonmetallic mineral mines, quarries, coke ovens, ore-dressing plants, smelters, and auxiliary works connected with ore-dressing plants and smelters.

[3] Canadian Labor Gazette, Ottawa, July 1941.

dent compensation under Dominion or Provincial compensation legislation.

The provisions of the order in council (P. C. 19/4600), extending the Government Employees' Compensation Act to trainees, read as follows:

(1) All persons who are or may be in training under the War Emergency Training Program, as authorized by order in council P. C. 4506 of September 11, 1940, shall be deemed to be employees within the meaning of that term as defined in the Government Employees' Compensation Act for all purposes other than the payment of compensation for temporary disability, but allowing in all temporary disability cases necessary first aid, medical and hospitalization expenses and, in cases where hospitalization is unnecessary, continuation during the period of disability of such subsistence allowance as was being provided to the trainee immediately prior to the time of the causative accident, and subject to the following provision of this order, the said act shall apply accordingly;

(2) As persons in training as aforesaid are not paid a direct wage or salary, the amount of compensation to be paid to or in respect of any trainee under the said act shall be computed as though the injured trainee had been in receipt of a fixed wage of $12.50 per week at the date of the causative accident, regardless of any minimum rate of compensation, statutory or otherwise, which may be in effect in any Province at that date.

Cost of Living

LIVING COSTS IN LARGE CITIES, AUGUST 15, 1941

LIVING costs in large cities increased by 0.8 percent from mid-July to mid-August. The cost-of-living index of the Bureau of Labor Statistics for August 15, at 106.0 percent of the 1935–39 average, was 7.5 percent higher than when war broke out in Europe 2 years ago. Of this increase, over 5 percent occurred since the beginning of 1941. Food and clothing costs showed the greatest advance from July to August, but rents, coal, housefurnishings, automobile tires and tubes, have also been advancing in all parts of the country.

Food.—Retail food prices went up 1.2 percent between July 15 and August 12, to the highest level in 10 years. The rise continued in the last half of August, according to preliminary reports from 18 cities.

Country-wide advances from mid-July to mid-August were reported for bread, fresh milk, canned goods, beef, pork, coffee, and shortenings. Other foods, such as lamb, chicken, apples, and most of the fresh vegetables, are selling at seasonally low levels. The index of retail cost of 54 important foods, at 108 percent of the 1935–39 average, is now 12 percent higher than last year. Although food prices have been rising continuously since November, the advance has been at a more rapid rate since March and the index rose 10 percent between March and August.

Clothing.—Clothing prices, continuing the steady rise since last February, advanced 1.6 percent between mid-July and mid-August. Greatest advances of more than 3 percent were reported in Cleveland, Kansas City, Houston, and Pittsburgh. Prices for men's woolen clothing, cotton work clothing, undershirts, and shoes and for women's cotton wash frocks and silk and rayon slips again advanced.

Percentage changes in prices of some important articles of clothing from July to August of this year and from August 1939 to August 1941 are shown in the following statement.

	July 15, 1941, to Aug. 15, 1941	*Aug. 15, 1939, to Aug. 15, 1941*
Men's overalls	+2.5	+18.0
Men's work shirts	+1.3	+15.5
Men's work trousers	+1.7	+11.2
Men's work shoes	+1.6	+10.4
Women's percale dresses	+1.2	+8.5
Women's silk and rayon slips	+1.2	+10.4
Women's shoes	+0.6	+2.4
Women's silk hose	+2.4	+1.5

Rents.—Ordinarily rents do not change much in midsummer. This August, however, there were some advances in 14 of the 20 large cities surveyed. On the average, for homes occupied by moderate-income families a rise of 0.2 percent was reported. The largest number of increases occurred for dwellings renting between $20 and $30. These rent reports do not include rooms in rooming and boarding houses or furnished apartments.

Fuel.—The cost of fuel—coal, coke, and wood—went up in most sections of the country. The only exceptions among the 34 cities in which these prices are collected each month were Denver, San Francisco, Los Angeles, New Orleans, and Richmond. Anthracite and bituminous-coal prices advanced between July and August in most of the cities. There were also reports of further increases in prices of fuel oil, particularly in the New England cities and in New York.

Housefurnishings.—Prices of housefurnishings, which have been rising steadily since January 1941, increased by 0.8 percent during the month, in a Nation-wide advance. Living-room and bedroom suites were again quoted at higher prices and there were also substantial advances for washing machines, radios, and mattresses. Prices of sheets rose in half of the cities surveyed, but August white sales in the other cities brought the average price of sheets below the July level.

Recent changes in prices paid by wage earners and clerical workers for some selected housefurnishings are shown below:

	July 15, 1941, to Aug. 15, 1941	*Aug. 15, 1939, to Aug. 15, 1941*
Living-room suites	+2.3	+24.3
Bedroom suites	+1.1	+14.4
Electric refrigerators	+0.1	−10.7
Washing machines	+1.5	+11.0
Rugs	+0.9	+22.7
Linoleum	+0.7	−0.7
Mattresses	+1.0	+8.1
Sheets	−1.3	+12.6

Miscellaneous goods and services.—Retail prices of soaps continued to move upward, following advances in wholesale prices for fats and oils. General increases in prices of rubber tires and inner tubes were also reported, occurring in 17 of the 20 cities. In most cities, gasoline prices remained about the same in August as in July, but there was a substantial rise in Kansas City and a decline in St. Louis.

Table 1 presents percentage changes in the cost of goods purchased by wage earners and lower-salaried workers in 20 large cities and these cities combined from July 15, 1941, to August 15, 1941. Indexes of these costs, based on average costs in 1935–39 as 100, are presented in table 2.

TABLE 1.—*Percent of Change From July 15 to August 15, 1941, in Cost of Goods Purchased by Wage Earners and Lower-Salaried Workers, by Groups of Items*

City	All items	Food	Clothing	Rent	Fuel, electricity, and ice	House-furnishings	Miscellaneous
Average: Large cities	+0.8	[1] +1.2	+1.6	+0.2	[2] +0.9	+0.8	+0.1
New England: Boston	+1.2	+2.5	+.2	+.2	+1.1	+.4	+.2
Middle Atlantic:							
Buffalo	+.5	+.9	+.9	[3]	+.7	+.3	+.1
New York	+.5	+.7	+1.2	+.1	+.4	+.3	+.2
Philadelphia	+.9	+1.4	+1.3	+.4	+1.5	[3]	+.2
Pittsburgh	+.6	+.3	+3.1	[3]	+.2	+1.1	+.3
East North Central:							
Chicago	+.7	+.6	+3.0	+.2	+.8	+2.8	+.1
Cincinnati	+1.6	+4.1	+.2	[3]	+1.3	+.3	+.3
Cleveland	+1.8	+3.1	+4.3	+.5	+1.1	+1.3	+.3
Detroit	+.4	−.1	+1.0	+.3	+2.0	+.7	[3]
West North Central:							
Kansas City	+1.1	+.6	+3.7	+.6	+1.5	+.7	+1.1
Minneapolis	+.8	+1.7	+.3	+.2	+1.0	+.6	+.2
St. Louis	+.4	+.8	+1.7	[3]	+1.2	+.2	−.5
South Atlantic:							
Baltimore	+.8	+.9	+1.6	+.6	+1.4	+1.5	+.3
Savannah	+.7	+1.1	+1.1	[3]	+.4	+1.4	+.2
East South Central: Birmingham	+1.2	+1.5	+2.8	+.7	+1.1	+.8	+.4
West South Central: Houston	+.8	+.7	+3.3	+.3	+.1	+1.3	+.3
Mountain: Denver	+1.0	+1.5	+3.0	+.2	[3]	+1.0	+.2
Pacific:							
Los Angeles	+.7	+2.0	+.9	[3]	[3]	+.5	−.2
San Francisco	+.5	+.9	+.5	+.1	[3]	+.7	+.2
Seattle	+1.1	+2.7	+.7	+.1	+.1	+2.0	+.2

[1] Based on data for 51 cities.
[2] Based on data for 34 cities.
[3] No change.

TABLE 2.—*Indexes of Cost of Goods Purchased by Wage Earners and Lower-Salaried Workers, by Groups of Items, August 15, 1941*

[Average 1935-39=100]

City	All items	Food	Clothing	Rent	Fuel, electricity, and ice	House-furnishings	Miscellaneous
Average: Large cities	106.0	[1] 108.0	105.9	106.3	[2] 103.2	108.1	103.8
New England: Boston	104.9	107.3	103.1	101.2	109.2	105.3	103.2
Middle Atlantic:							
Buffalo	108.5	111.8	105.0	110.6	101.9	110.0	106.1
New York	105.3	107.8	105.7	102.8	103.8	103.0	104.3
Philadelphia	104.4	104.7	105.0	105.1	103.0	106.8	103.3
Pittsburgh	106.8	109.0	106.9	106.8	106.0	109.6	103.3
East North Central							
Chicago	106.6	108.1	103.7	110.7	102.5	108.5	103.4
Cincinnati	106.1	109.1	105.4	103.0	103.7	110.9	103.7
Cleveland	109.0	112.1	110.2	110.8	111.8	112.7	102.7
Detroit	107.4	107.1	106.0	112.4	104.2	109.8	105.0
West North Central:							
Kansas City	103.3	101.8	107.9	104.7	102.7	103.3	102.3
Minneapolis	106.9	110.0	104.4	108.6	98.2	108.8	105.7
St. Louis	105.0	109.4	107.0	101.8	105.1	103.0	101.5
South Atlantic:							
Baltimore	107.2	109.6	106.0	109.6	103.2	108.8	103.5
Savannah	107.9	114.8	105.2	106.6	99.5	108.0	103.2
East South Central: Birmingham	108.2	106.8	110.9	121.4	97.5	106.1	104.6
West South Central: Houston	105.7	109.5	108.2	107.2	93.2	112.4	101.6
Mountain: Denver	104.7	105.8	104.0	106.9	97.4	109.2	103.5
Pacific:							
Los Angeles	106.3	109.3	107.4	106.6	94.2	107.0	104.4
San Francisco	106.1	108.2	106.6	104.1	91.6	108.1	106.3
Seattle	108.5	112.2	108.2	111.4	95.8	105.3	106.3

[1] Based on data for 51 cities.
[2] Based on data for 34 cities.

Labor Organizations

GROWTH OF FEDERATION OF JEWISH LABOR IN PALESTINE [1]

AN INCREASE of 42,000 in the Jewish population of Palestine was reported for 1939. New immigrants accounted for 34,000 in this expansion. In the first half of 1940 an additional 10,000 was added to the population, 7,000 of this number being new immigrants.

Parallel with the upward trend in the population was an increase of 8,000 in the total working community in 1939 and of 4,000 in the first half of 1940. These figures do not include the wives of workers.

In 1939 the General Federation of Jewish Labor added 7,000 to its membership, and in the first half of the following year, 2,600. These statistics include juvenile members but not workers' wives.

The accompanying table shows the membership of the federation for specified years. The proportion of Federation members in the general working community declined slightly in 1939 and 1940.

This is, to a large extent, due to the heavy influx of "illegal" immigrants, only some of whom became members of the Federation and others of whom were not accepted as members (cf. a similar decline during 1934–35, also years of heavy immigration not containing a correspondingly large percentage of General Federation of Jewish Labor members). Another reason for the slight percentual decrease during the past 2 years is the stricter control exercised over the payment of membership dues.

Membership of General Federation of Jewish Labor, 1925 and 1930–40

Year	Total gainful workers (excluding workers' wives)	Federation members, including juveniles ("working youth")		
		Number—		Percent of total gainful workers
		Including workers' wives	Excluding workers' wives	
1925	17,000	10,085	9,000	53
1930	27,300	25,378	20,200	74
1931	28,000	30,060	21,000	75
1932	30,000	30,078	23,500	76
1933	35,000	35,000	26,600	76
1934	50,000	48,000	37,000	74
1935	70,000	67,000	52,000	74
1936	90,000	87,000	69,000	76
1937	105,000	99,000	78,000	74
1938	107,000	100,000	80,000	75
1939	112,000	108,000	82,000	73
1940	120,000	117,000	89,000	74

[1] Data are from General Federation of Jewish Labor in Eretz-Israel (Palestine), Executive Committee, Statistical Department, Statistical Abstract, 1939–1940, Tel-Aviv, 1940.

SWISS TRADE-UNION MEMBERSHIP, 1940

THE number of members in the Affiliated Swiss Trade Unions declined in both 1939 and 1940, according to a recent report from the American Consulate General, Zurich, Switzerland. The reduction in membership in 1939 amounted to 1 percent and in 1940 to 4.7 percent. Of the 10,471 members lost in the latter year, 6,320 belonged to the Building Construction and Woodworkers' Union and 1,855 to the Metal Workers' and Watchmakers' Union.

The membership of the various unions in 1939 and 1940 is shown in the following table.

Membership in Swiss Trade-Unions, 1939 and 1940

Organization	Number of members on December 31—		Organization	Number of members on December 31—	
	1939	1940		1939	1940
All organizations	223,073	212,602	Metal workers and watchmakers	67,679	65,824
Building construction and woodworking	41,421	35,101	Butchers	2,330	2,215
Clothing, leather, and other apparel	2,662	2,611	Civil service	18,979	18,505
Bookbinders	1,749	1,733	Post-office officials	3,663	3,602
Railway men	31,769	31,574	Post, telephone, and telegraph employees	8,558	8,475
Commerce, transportation, and food	23,645	22,796	Embroidery	979	927
Hatmakers	270	250	Telephone and telegraph officials	1,775	1,793
Lithographers	1,720	1,729	Textile factory workers	7,297	6,896
			Textile home workers	1,326	1,288
			Typographers	7,251	7,289

Industrial Disputes

RECENT STRIKES

EXCEPT for April and May, strike activity in August was greater than in any preceding month of 1941, according to preliminary estimates of the Bureau of Labor Statistics which show 460 new strikes in August, involving 190,000 workers. The man-days of idleness during all strikes in progress in August amounted to 1,825,000. The largest strike occurring during the month involved more than 15,000 workers at the Kearny (N. J.) plant of the Federal Shipbuilding and Drydock Co., from August 7 to 24, when it was taken over and operated under the direction of the United States Government.

The number of strikes in August was about 7 percent greater than in July, approximately double the number in August a year ago, and 58 percent greater than the average for August during the 5-year pre-defense period (1935–39). The number of workers involved was 36 percent greater than in the preceding month, more than three times as great as in August a year ago, and more than double the average number for August 1935–39. The amount of idleness during strikes in August was 40 percent greater than in July, 2½ times as great as in August 1940, and about 45 percent greater than the August 5-year average (1935–39).

Comparative figures for July, August, and other periods are shown in the following table:

Strikes in July and August 1941 Compared with Averages of Preceding 5-Year Period

Item	August 1941 [1]	July 1941 [1]	August 1940	Averages for 5-year period, 1935–39	
				August	July
Number of strikes beginning in month	460	430	231	291	258
Number of workers involved in new strikes	190,000	140,000	61,356	82,829	95,495
Number of man-days idle during all strikes in progress during month	1,825,000	1,300,000	706,308	1,261,133	1,471,130

[1] Preliminary estimates.

STRIKES IN JUNE 1941 [1]

STRIKE activity in June 1941, although considerably less than in April and May, was still substantially greater than in any June since 1937. During the first 6 months of 1941 the number of strikes was more than three-fourths as great as in the entire year of 1940 and, principally because of the bituminous-coal dispute in April and several other large strikes, the number of workers involved and the amount of idleness during strikes in the first 6 months of 1941 were more than double the corresponding figures for the entire year of 1940.

The Bureau has obtained detailed information on 325 strikes which began in June 1941 and involved nearly 139,000 workers. There were 1,448,000 man-days of idleness during June as a result of 514 strikes in progress during the month; 189 of these strikes had continued into June from preceding months. The largest strike continuing into June involved about 12,000 lumber workers in western Washington, who went on strike early in May and were out until about the middle of June. The largest strikes beginning in June were the short strike of building-trades workers in New York City and the strike at the Inglewood, Calif., plant of the North American Aviation, Inc.

TABLE 1.—*Trend of Strikes, 1935 to June 1941*

Year and month	Number of strikes—			Workers involved in strikes—			Man-days idle during month or year
	Beginning in month or year	In progress during month	Ending in month	Beginning in month or year	In progress during month	Ending in month	
1935	2,014			1,117,213			15,456,337
1936	2,172			788,648			13,901,956
1937	4,740			1,860,621			28,424,857
1938	2,772			688,376			9,148,273
1939	2,613			1,170,962			17,812,219
1940	2,508			576,988			6,700,872
1940							
January	128	222	124	26,937	41,284	32,743	246,674
February	172	270	153	29,509	38,050	17,252	289,992
March	178	295	187	22,433	43,231	29,593	386,981
April	228	336	214	39,481	53,119	29,226	441,866
May	239	361	239	53,231	77,124	59,263	665,688
June	214	336	190	38,542	56,403	36,559	484,007
July	244	390	227	63,126	82,970	54,100	585,651
August	231	394	253	61,356	90,226	47,199	706,308
September	253	394	242	65,362	108,389	72,523	780,570
October	267	419	253	71,997	107,863	68,730	915,014
November	207	373	243	62,399	101,532	82,571	739,807
December	147	277	168	42,613	61,576	43,605	458,314
1941 [1]							
January	231	340	216	91,512	109,483	53,834	660,275
February	252	376	229	69,752	125,401	64,905	1,130,355
March	332	479	303	115,799	176,295	123,186	1,552,012
April	371	547	371	509,440	562,549	468,245	7,090,157
May	436	612	423	324,009	418,313	338,903	2,161,279
June	325	514	348	138,983	218,393	140,398	1,448,234

[1] Succeeding reports may show slightly different figures for the various months due to corrections and additions made as later information is received.

[1] The Bureau's statistics on strikes exclude minor disputes lasting less than 1 day or involving fewer than 6 workers.

Slightly more than 0.75 percent of the employed workers were involved in strikes during June as compared with 1.53 percent in May. The idleness during strikes in June amounted to only 0.25 percent of the available working time, as compared with 0.38 percent in May. A larger proportion of workers were involved in strikes during June in the nonferrous metals industries (4.12 percent) than in any other industry group. This was due largely to a 3-day strike of approximately 7,000 workers at Cleveland plants of the Aluminum Co. of America and the 2-day strike of about 4,000 workers at Detroit plants of the Bohn Aluminum and Brass Corporation. Less than 1 percent of the workers in anthracite and bituminous-coal mining were involved in strikes during June, whereas in May the entire anthracite industry was idle for 1 day and more than 13 percent of the bituminous miners were on strike at some time during the month. The highest ratio of idleness to available working time in June was 1.37 percent in the lumber industries, principally as a result of the western Washington lumber strike which began in May.

TABLE 2.—*Workers Involved and Man-Days Idle During Strikes in May and June 1941, Compared With Total Workers and Available Work*

Industry or group	Percent of employed workers [1] involved in strikes during—		Man-days idle during strikes as a percentage of the total man-days of work available [2]	
	May	June	May	June
All industries	1.53	0.79	0.38	0.25
All manufacturing groups	2.15	1.46	.73	.49
Iron, steel, and their products, excluding machinery	2.08	1.28	.61	.41
Machinery, excluding transportation equipment	1.23	.51	.48	.19
Transportation equipment	7.14	3.00	1.65	.62
Nonferrous metals and their products	1.81	4.12	.61	.82
Lumber and allied products	3.58	3.16	2.08	1.37
Stone, clay, and glass products	3.23	3.11	.85	1.19
Textiles and their products	1.27	.99	.40	.44
Fabrics	.95	.76	.33	.30
Wearing apparel	2.08	1.58	.60	.81
Leather and its manufactures	1.18	.27	.42	.10
Food and kindred products	1.86	1.64	.74	.51
Tobacco manufactures	0	0	0	0
Paper and printing	.57	.49	.24	.28
Chemicals and allied products	1.12	1.19	.58	.43
Rubber products	2.34	1.81	.62	.35
Building and construction	2.43	2.37	.61	.28
Mining:				
Anthracite	100.00	.64	8.51	.06
Bituminous coal	13.32	.48	2.44	.23
Metalliferous	1.06	0	.80	0
Quarrying and nonmetallic	.18	.46	.10	.12

[1] "Employed workers" as used here includes all workers except those in occupations and professions where strikes rarely, if ever, occur. In general, the term "employed workers" includes all employees except the following groups: Government workers, agricultural wage earners on farms employing less than 6, managerial and supervisory employees, and certain groups which, because of the nature of their work, cannot or do not strike, such as teachers, clergymen, and domestic servants. Self-employed and unemployed persons are, of course, excluded.

[2] "Total man-days of work available" was estimated for purposes of this table by multiplying the total employed workers in each industry or group by the number of days worked by most employees in the respective groups.

New York building-trades strike.—Building-trades workers and truck drivers in Queens Borough of New York City went on strike June 19 in an effort to unionize the small-home construction field. One week later the strike spread, as bricklayers in other boroughs stopped work also and union truck drivers employed by building-material supply dealers refused to deliver materials to either union or nonunion projects. On June 30 and July 1, it was estimated that more than 30,000 building-trades workers and truck drivers were idle in connection with the dispute. The building-trades unions regarded the widespread stoppage as an attempt to eliminate non-union conditions existing throughout the metropolitan area.

Through intervention by the Mayor's office, a settlement was reached July 1, by which most of the employees returned to work when a number of building-supply firms agreed that they would not deliver materials to nonunion projects. The workers on strike in Queens, however, remained idle throughout the month.

North American Aviation, Inc., strike.—The strike at the Inglewood, Calif., plant of North American Aviation, Inc., began June 5 and involved about 11,000 workers. Negotiations between the company and the union (United Automobile Workers of America, C. I. O.) had been in progress for some weeks, with the union seeking a general wage increase of 10 cents per hour and a minimum of 75 cents per hour in place of the existing 50-cent minimum.

When a strike threatened during the latter part of May, the dispute was certified by the Secretary of Labor to the National Defense Mediation Board. Company and union representatives met with the Board in Washington on May 27, with the result that the strike scheduled for the next day was postponed indefinitely, pending the hearings before the Board. While the hearings were in progress, however, a strike was called June 5 by local union officials without authorization from the international union. After all efforts to get the men back to work failed, President Roosevelt, on June 9, issued an order directing the Secretary of War to take over the plant, on the ground that the strike was interfering with national defense by holding up large orders of aircraft for the Army, Navy, and British air forces. Troops moved in immediately and by the end of the next day strikers had voted to call off the strike, and practically full crews were at work. The military forces remained at the plant throughout the month of June. In the meantime, efforts to settle the issues in dispute were continued by the National Defense Mediation Board. A settlement acceptable to both parties was reached July 1, and an agreement was signed providing for a wage increase of 10 cents per hour and a graduated scale for trainees starting at 60 cents per hour and increasing 5 cents every 4 weeks until 75 cents is reached. The contract also contained a maintenance-of-membership clause and

provided for immediate classification of all production jobs. On July 2, the President issued an order terminating possession of the plant by the military forces, whereupon the Army was withdrawn and operation of the plant was turned back to the company.

TABLE 3.—*Strikes in June 1941, by Industry, with Comparative Man-Day Figures for the Preceding 2 Years*

Industry	June 1941			Number of man-days idle during the 12-month period ending with—	
	Strikes beginning in month		Number of man-days idle during month		
	Number	Workers involved		June 1941	June 1940
All industries	**325**	**138,983**	**1,448,234**	**18,213,573**	**9,234,449**
Iron, steel, and their products, excluding machinery	**15**	**8,433**	**103,809**	**899,845**	**255,800**
Blast furnaces, steel works, and rolling mills	6	6,794	33,801	314,044	62,319
Bolts, nuts, washers, and rivets	1	415	1,660	15,580	
Cast-iron pipe and fittings				50,206	35,935
Cutlery (not including silver and plated cutlery) and edge tools			250	3,164	152
Forgings, iron and steel	1	52	312	12,069	6,224
Hardware	1	17	119	7,163	26,091
Plumbers' supplies and fixtures			3,875	38,474	11,535
Steam and hot-water heating apparatus and steam fittings			14,871	57,437	7,178
Stoves	2	137	397	40,225	26,023
Structural and ornamental metal work	1	40	4,173	22,011	11,029
Tin cans and other tinware			2,910	42,535	23,039
Tools (not including edge tools, machine tools, files, and saws)			3,556	11,698	5,009
Wire and wire products	1	818	16,331	111,246	6,429
Other	2	160	21,554	173,993	34,837
Machinery, excluding transportation equipment	**20**	**3,029**	**72,096**	**2,316,304**	**366,063**
Agricultural implements	1	459	6,283	483,726	15,089
Cash registers, adding machines, and typewriters			3,253	88,691	153
Electrical machinery, apparatus, and supplies	2	270	38,471	699,149	60,956
Engines, turbines, tractors, and water wheels	2	105	1,395	19,868	25,200
Foundry and machine-shop products	8	1,397	10,210	722,096	184,313
Machine tools (power driven)	1	19	487	91,515	5,998
Radios and phonographs	4	657	3,836	50,882	6,793
Textile machinery and parts				1,320	
Other	2	122	8,161	159,057	67,561
Transportation equipment	**12**	**20,700**	**129,636**	**1,564,757**	**2,452,875**
Aircraft	2	12,039	52,218	101,784	22,258
Automobiles, bodies and parts	8	6,861	12,673	1,025,723	2,325,027
Cars, electric- and steam-railroad (including repair shops)	1	1,600	7,600	100,371	73,398
Shipbuilding	1	200	57,145	329,969	24,304
Other				6,910	7,888
Nonferrous metals and their products	**15**	**12,856**	**60,730**	**401,961**	**206,006**
Aluminum manufactures	4	11,830	36,750	97,276	320
Brass, bronze, and copper products			6,056	53,863	29,617
Clocks, watches, and other time-recording devices				312	6,326
Jewelry				9,720	2,158
Lighting equipment	1	155	5,413	38,403	3,980
Silverware and plated ware	1	12	24	49,575	1,925
Smelting and refining—Copper, lead, and zinc				29,670	117,508
Stamped and enameled ware	1	121	4,881	46,313	35,624
Other	8	738	7,606	76,829	8,548
Lumber and allied products	**18**	**2,389**	**201,509**	**1,287,611**	**708,238**
Furniture	4	857	21,571	285,952	199,463
Millwork and planing	7	642	20,694	99,052	87,398
Sawmills and logging camps			144,814	789,778	299,765
Other	7	890	14,430	112,829	121,612
Stone, clay, and glass products	**12**	**5,313**	**84,931**	**422,945**	**152,757**
Brick, tile, and terra cotta	3	97	35,557	180,851	48,117
Cement				31,415	1,148
Glass	2	554	12,218	62,853	49,372
Marble, granite, slate, and other products				134	2,467
Pottery	1	293	16,649	72,519	7,091
Other	6	4,369	20,507	75,173	44,562

TABLE 3.—*Strikes in June 1941, by Industry, with Comparative Man-Day Figures for the Preceding 2 Years*—Continued

Industry	June 1941			Number of man-days idle during the 12-month period ending with—	
	Strikes beginning in month		Number of man-days idle during month		
	Number	Workers involved		June 1941	June 1940
Textiles and their products	**33**	**9,008**	**170,704**	**1,188,376**	**899,023**
Fabrics	15	4,575	72,861	624,013	442,803
Carpets and rugs				3,826	891
Cotton goods	7	3,353	22,033	308,710	274,044
Cotton small wares				857	720
Dyeing and finishing textiles	1	10	70	36,885	17,395
Silk and rayon goods	1	66	1,056	90,792	56,652
Woolen and worsted goods	2	468	33,141	93,305	43,640
Other	4	678	16,561	89,638	49,461
Wearing apparel	18	4,433	97,843	564,363	456,220
Clothing, men's	2	261	783	25,541	39,709
Clothing, women's	5	237	13,857	181,373	203,468
Corsets and allied garments				9,825	3,820
Men's furnishings			3,654	28,142	24,537
Hats, caps, and millinery			1,386	12,183	54,735
Shirts and collars	6	2,511	13,433	36,643	17,942
Hosiery	2	383	2,711	103,433	65,630
Knit goods	3	1,041	62,019	144,355	43,376
Other				22,868	3,003
Leather and its manufactures	**6**	**723**	**6,688**	**122,525**	**175,522**
Boots and shoes	4	366	1,167	70,537	64,345
Leather			1,444	39,705	7,483
Other leather goods	2	357	4,077	12,283	103,694
Food and kindred products	**26**	**12,400**	**96,643**	**480,711**	**289,037**
Baking	11	6,049	23,405	52,805	22,829
Beverages	3	776	7,004	13,649	6,560
Butter				930	31
Canning and preserving	2	91	1,103	144,484	79,848
Confectionery			7,490	41,944	14,343
Flour and grain mills	1	14	527	10,388	4,890
Ice cream				871	219
Slaughtering and meat packing	4	1,141	21,409	94,397	85,282
Sugar refining, cane	1	2,167	19,879	55,476	66,402
Other	4	2,162	15,826	65,767	8,633
Tobacco manufactures				**26,977**	**103,407**
Chewing and smoking tobacco and snuff					18
Cigars				26,977	103,389
Paper and printing	**13**	**1,676**	**38,097**	**161,251**	**118,095**
Boxes, paper	3	511	1,635	48,607	37,498
Paper and pulp	1	96	1,986	17,932	26,278
Printing and publishing:					
Book and job	3	233	2,401	19,055	4,705
Newspapers and periodicals	2	480	945	7,929	12,532
Other	4	356	31,130	67,728	37,082
Chemicals and allied products	**8**	**3,602**	**40,721**	**338,629**	**299,426**
Chemicals	1	2,700	28,041	130,332	19,058
Cottonseed—oil, cake, and meal				1,661	13,255
Druggists' preparations			384	851	1,010
Explosives			945	5,929	801
Fertilizers				842	390
Paints and varnishes	2	99	493	14,915	3,861
Petroleum refining	2	367	1,240	10,987	24,960
Rayon and allied products				85,000	212,626
Soap				672	3,474
Other	3	436	9,618	87,440	19,991
Rubber products	**4**	**1,360**	**10,781**	**123,954**	**106,925**
Rubber boots and shoes	1	679	679	6,329	690
Rubber tires and inner tubes				40,547	66,798
Other rubber goods	3	681	10,102	77,078	39,437
Miscellaneous manufacturing	**11**	**1,072**	**24,348**	**287,984**	**145,989**
Electric light, power, and manufactured gas	1	200	4,200	7,271	11,358
Broom and brush	1	35	105	10,388	
Furriers and fur factories				13,059	33,274
Other	9	837	20,043	257,266	101,357

TABLE 3.—*Strikes in June 1941, by Industry, with Comparative Man-Day Figures for the Preceding 2 Years*—Continued

Industry	June 1941			Number of man-days idle during the 12-month period ending with—	
	Strikes beginning in month		Number of man-days idle during month		
	Number	Workers involved		June 1941	June 1940
Extraction of minerals	**6**	**1,963**	**17,597**	**5,758,713**	**338,570**
Coal mining, anthracite	1	453	773	179,456	70,666
Coal mining, bituminous	4	1,321	15,622	5,551,936	209,506
Metalliferous mining				21,027	48,402
Quarrying and nonmetallic mining	1	189	1,202	2,290	6,326
Other				4,004	3,670
Transportation and communication	**25**	**6,475**	**84,760**	**435,238**	**746,203**
Water transportation	8	1,642	7,158	109,334	378,782
Motortruck transportation	12	3,804	71,271	217,448	96,721
Motorbus transportation	1	26	5,004	58,164	14,311
Taxicabs and miscellaneous	4	1,003	1,327	34,588	228,692
Electric railroad				11,051	
Steam railroad				340	568
Telephone and telegraph				2,181	25,679
Air transportation					52
Radio broadcasting and transmitting				365	1,368
Other				1,767	30
Trade	**31**	**2,012**	**68,596**	**970,075**	**315,184**
Wholesale	11	562	3,756	136,421	78,463
Retail	20	1,450	64,840	833,654	236,721
Domestic and personal service	**25**	**2,799**	**25,638**	**130,750**	**220,138**
Hotels, restaurants, and boarding houses	9	1,122	16,299	82,442	62,453
Personal service, barbers, beauty parlors	1	142	444	1,736	4,390
Laundries	12	1,198	7,661	32,832	94,708
Dyeing, cleaning, and pressing	1	170	170	4,674	52,710
Elevator and maintenance workers (when not attached to specific industry)	2	167	1,064	8,130	4,803
Other				936	1,074
Professional service	**1**	**40**	**11,643**	**33,637**	**25,062**
Recreation and amusement	1	40	11,291	23,387	20,432
Professional				640	1,562
Semiprofessional, attendants, and helpers			352	9,610	3,068
Building and construction	**28**	**36,488**	**98,994**	**745,736**	**433,673**
Buildings, exclusive of PWA	25	35,988	95,403	693,863	305,053
All other construction (bridges, docks, etc., and PWA buildings)	3	500	3,591	51,873	128,620
Agriculture and Fishing			**60,000**	**411,176**	**457,973**
Agriculture			60,000	387,440	185,923
Fishing				23,736	272,050
WPA and relief projects	**1**	**20**	**218**	**2,769**	**386,252**
Other nonmanufacturing industries	**15**	**6,625**	**40,095**	**101,649**	**32,231**

As indicated in table 3, new strikes were more numerous in June in the textile industries, where 33 occurred, than in any other industry group. There were 31 new strikes in wholesale and retail trade, 28 in building and construction, and 26 in the food industries. The building and construction industry had more workers (36,500) involved in new strikes than any other industry group, principally because of the New York building-trades strike; 20,700 workers were involved in transportation-equipment manufacturing strikes, principally as a result of the North American Aviation dispute. There were 12,900 workers involved in new strikes in the nonferrous metal

industries, 12,400 in the food industries, and 9,000 in textiles. The lumber industries, largely because of the strike in western Washington which began in May, had more idleness (201,500 man-days) than any other industry group and was followed in order by textiles (170,700), transportation equipment (129,600), iron and steel (103,800), building and construction (99,000), and the food industries (96,600).

The State of California experienced more idleness during strikes in June than any other State. The largest contributing factors were the North American Aviation strike, the San Francisco shipyard strike which began in May and continued through most of June, and the strike of lemon pickers in Ventura County which began in January and was still in progress at the end of June. The idleness in California during June amounted to 273,000 man-days; in New York, to 208,000; in Pennsylvania, to 184,000; in Washington, to 156,000; and in Ohio, to 120,000.

New York had more new strikes (53) and more workers involved (41,000) than any other State (see table 4), and was followed in number of strikes by Pennsylvania (40), Ohio (32), California (31), Michigan (29), and in number of workers by Michigan (24,300), California (17,000), and Pennsylvania (13,700).

Slightly more than half of the strikes beginning in the first 6 months of 1941, as indicated in table 5, involved fewer than 100 workers each; about two-fifths of the strikes involved from 100 up to 1,000 workers each, leaving about 7 percent of the strikes in each of which 1,000 or more workers were involved. In each of 15 strikes (less than 1 percent of the total), 10,000 or more workers were involved.

The average number of workers involved in the 325 strikes which began in June was 428 as compared with an average of 642 in the 1,947 strikes which began in the first 6 months of the year. The 6-month average was increased considerably by the large bituminous-coal stoppage in April in which more than 300,000 workers were involved.

As may be expected in a period of rising prices and increasing living costs, the proportion of strikes over wages and hours has been increasing. In the 6-month period, January to June 1941, 35.6 percent of the total strikes were over wage-and-hour issues. During the first 3 months the percentage was 30 or less, while in April it rose to 38.3, in May to 42.1, and in June 44.6. During this period there was a corresponding decrease in the proportion of strikes over union-organization matters. During the first 3 months the percentage of union-organization strikes averaged about 53, decreased to 50.5 in April, to 47.7 in May, and to 43.7 in June.

TABLE 4.—*Strikes in June 1941, by States, with Comparative Man-Day Figures for the Preceding 2 Years*

State	Strikes beginning in June 1941		Number of man-days idle during June	Number of man-days idle during the 12-month period ending with—	
	Number	Workers involved		June 1941	June 1940
All States	[1] 325	138,983	1,448,234	18,213,573	9,234,449
Alabama	1	26	967	538,375	65,080
Arizona	2	161	609	17,041	8,555
Arkansas	6	379	2,516	48,785	51,680
California	31	17,024	273,140	1,633,148	827,460
Colorado				56,073	26,232
Connecticut	5	193	8,048	193,809	50,067
Delaware				59,237	5,295
District of Columbia	1	374	2,743	20,551	19,165
Florida	1	13	52	48,515	121,979
Georgia			4,654	51,255	78,591
Idaho			274	8,564	1,655
Illinois	17	3,919	62,714	1,335,022	523,181
Indiana	14	4,185	36,589	553,977	271,078
Iowa	1	246	14,304	213,379	30,654
Kansas			150	9,774	12,630
Kentucky	3	249	7,972	637,838	83,789
Louisiana	7	857	4,927	51,953	22,897
Maine	1	16	7,912	39,834	2,508
Maryland	8	2,523	5,145	246,298	231,853
Massachusetts	15	7,003	30,780	212,024	335,607
Michigan	29	24,319	80,662	1,459,793	2,244,702
Minnesota	5	498	13,690	129,455	90,827
Mississippi				10,744	23,648
Missouri	7	1,147	19,192	276,971	167,299
Montana			2,143	5,997	20,969
Nebraska	1	10	20	4,454	7,722
Nevada	1	10	28	526	1,438
New Hampshire	2	817	4,762	11,648	10,748
New Jersey	16	2,221	53,290	663,744	360,855
New Mexico			8,277	28,667	7,922
New York	53	40,982	208,353	1,721,091	1,110,920
North Carolina	3	986	5,653	114,301	99,946
North Dakota	1	100	600	2,088	13,714
Ohio	32	11,320	119,900	860,392	313,756
Oklahoma	2	42	1,356	8,019	35,376
Oregon	2	306	20,155	183,762	130,710
Pennsylvania	40	13,733	184,496	3,082,626	696,049
Rhode Island	2	300	2,629	70,737	30,823
South Carolina	3	1,144	3,406	68,049	102,803
South Dakota	1	10	128	128	463
Tennessee	9	1,250	70,267	287,233	115,162
Texas	4	284	4,886	85,867	90,561
Utah	2	34	2,121	28,147	25,687
Vermont				2,991	8,270
Virginia	3	252	2,564	229,616	129,471
Washington	6	1,057	155,716	763,302	378,156
West Virginia	1	52	3,788	1,578,808	55,039
Wisconsin	4	941	16,536	554,761	191,307
Wyoming			120	4,204	150

[1] The sum of this column is more than 325. This is due to the fact that 9 strikes which extended across State lines have been counted in this table as separate strikes in each State affected, with the proper allocation of number of workers involved and man-days idle.

The number of workers involved in wage-and-hour strikes during June amounted to 44.9 percent of the total—a smaller proportion than in May and April when the large coal-mining strikes occurred. (See table 6.) In the first 6 months of 1941, 58.7 percent of the total workers involved were concerned with wage-and-hour issues as compared with only 45.8 percent in the corresponding period of 1940.

TABLE 5.—*Strikes Beginning in the First 6 Months of 1941, by Industry Group and Number of Workers Involved*

Industry group	Total	Number of strikes in which the number of workers involved was—							
		6 and under 20	20 and under 100	100 and under 250	250 and under 500	500 and under 1,000	1,000 and under 5,000	5,000 and under 10,000	10,000 and over
All industries:									
Number	1,947	325	703	404	228	146	119	7	15
Percent	100.0	16.7	36.1	20.7	11.7	7.5	6.1	0.4	0.8
Manufacturing									
Iron, steel, and their products, excluding machinery	154	4	35	37	30	28	15	2	3
Machinery, excluding transportation equipment	155	9	58	34	25	15	12	1	1
Transportation equipment	67	2	8	13	6	13	20	2	3
Nonferrous metals and their products	60	11	17	11	10	2	8	1	------
Lumber and allied products	146	13	60	46	17	7	2	------	1
Stone, clay, and glass products	71	5	27	15	10	7	7	------	------
Textiles and their products	235	33	82	46	36	22	16	------	------
Leather and its manufactures	35	3	13	5	7	7	------	------	------
Food and kindred products	122	18	53	23	14	8	5	1	------
Tobacco manufactures	1	------	------	------	------	1	------	------	------
Paper and printing	69	18	23	20	6	1	1	------	------
Chemicals and allied products	37	4	16	7	6	1	3	------	------
Rubber products	26	3	5	5	6	6	1	------	------
Miscellaneous manufacturing	67	12	27	16	8	4	------	------	------
Nonmanufacturing									
Extraction of minerals	52	4	10	8	12	8	6	------	4
Transportation and communication	110	16	49	29	5	6	5	------	------
Trade	172	64	72	23	8	2	3	------	------
Domestic and personal service	93	33	39	17	3	1	------	------	------
Professional service	17	6	7	2	1	1	------	------	------
Building and construction	184	46	71	35	17	5	7	------	3
Agriculture and fishing	11	1	4	2	1	1	2	------	------
WPA and relief projects	2	1	1	------	------	------	------	------	------
Other nonmanufacturing industries	61	19	26	10	------	------	6	------	------

About 11 percent of the strikes in June, including 10 percent of the total workers involved, were over issues other than wages and hours or union-organization matters. These strikes involved a variety of issues including mining methods, racial difficulties in employment, severity of penalties, transportation guaranties, poor ventilation, excessive work loads, unsatisfactory supervisors, and work schedules—usually specific grievances growing out of the conditions of work.

As shown in table 7, unions affiliated with the American Federation of Labor were involved in more than half of the strikes occurring in the first 6 months of 1941, although these strikes included less than one-fourth of the total workers involved. Unions affiliated with the Congress of Industrial Organizations were involved in 37 percent of the strikes which included nearly three-fourths of the total workers involved. No unions were involved in about 3 percent of the strikes; these were small strikes, on the average, including only 1 percent of the total workers (see table 7).

TABLE 6.—*Strikes Beginning in June 1941, by Major Issues Involved, with Cumulative Figures for the Period, January to June 1941*

Major issue	Strikes beginning in June 1941				Strikes beginning in the period, January to June 1941			
	Number	Percent of total	Workers involved	Percent of total	Number	Percent of total	Workers involved	Percent of total
All issues	325	100.0	138,983	100.0	1,947	100.0	1,249,495	100.0
Wages and hours	145	44.6	62,391	44.9	694	35.6	734,107	58.7
Wage increase	135	41.5	60,932	43.8	607	31.1	715,167	57.3
Wage decrease	2	.6	543	.4	30	1.5	5,534	.4
Wage increase, hour decrease	8	2.5	916	.7	52	2.7	13,068	1.0
Wage decrease, hour increase					5	.3	338	(1)
Union organization	143	44.0	62,116	44.7	983	50.5	405,573	32.5
Recognition	19	5.8	4,511	3.2	183	9.4	160,407	12.9
Recognition and wages	65	20.0	47,172	34.0	413	21.2	139,602	11.2
Recognition, wages, and hours	11	3.4	604	.4	104	5.3	11,058	.9
Discrimination	12	3.7	3,705	2.7	75	3.9	15,110	1.2
Strengthening bargaining position	10	3.1	1,774	1.3	43	2.2	35,498	2.8
Closed or union shop	23	7.1	4,083	2.9	146	7.5	37,817	3.0
Other	3	.9	267	.2	19	1.0	6,081	.5
Miscellaneous	37	11.4	14,476	10.4	270	13.9	109,815	8.8
Sympathy	3	.9	859	.6	16	.8	21,818	1.7
Rival unions or factions	11	3.4	2,359	1.7	79	4.1	24,164	1.9
Jurisdiction [2]	5	1.5	686	.5	39	2.0	4,527	.4
Other	18	5.6	10,572	7.6	125	6.4	58,071	4.7
Not reported					11	.6	1,235	.1

[1] Less than a tenth of 1 percent.
[2] It is probable that the figures here given do not include all jurisdictional strikes. Because of the local nature of these disputes, it is difficult for the Bureau to find out about all of them.

TABLE 7.—*Strikes Beginning in the First 6 Months of 1941, by Affiliations of Labor Organizations Involved*

Labor organization involved	Strikes		Workers involved	
	Number	Percent of total	Number	Percent of total
Total	1,947	100.0	1,249,495	100.0
American Federation of Labor	1,042	53.4	303,794	24.3
Congress of Industrial Organizations	720	37.0	898,282	71.9
Unaffiliated unions	31	1.6	12,213	1.0
Railroad brotherhoods	2	.1	82	(1)
Two rival unions	73	3.7	20,670	1.7
Company unions	9	.5	1,766	.1
No organization	62	3.2	12,275	1.0
Organization involved, but type not reported	5	.3	164	(1)
Not reported	3	.2	249	(1)

[1] Less than a tenth of 1 percent.

The average duration of the strikes which ended during the first 6 months of 1941 was about 18 calendar days. About 41 percent of the strikes were terminated in less than 1 week after they began, 43 percent lasted from a week up to 1 month, and 16 percent lasted for a full month or more—54 strikes in the latter group having been in progress for 3 months or more (see table 8).

TABLE 8.—*Strikes Ending in the 6-Month Period, January to June 1941, by Industry Group and Duration*

Industry group	Total	Number of strikes with duration of—					
		Less than 1 week	1 week and less than ½ month	½ and less than 1 month	1 and less than 2 months	2 and less than 3 months	3 months or more
All industries:							
Number	1,890	772	474	332	211	47	54
Percent	100.0	40.7	25.1	17.6	11.2	2.5	2.9
Manufacturing							
Iron, steel, and their products, excluding machinery	151	74	39	17	17	2	2
Machinery, excluding transportation equipment	152	55	38	25	24	8	2
Transportation equipment	69	33	24	9	3		
Nonferrous metals and their products	56	22	18	9	4	1	2
Lumber and allied products	152	38	38	40	22	4	10
Stone, clay, and glass products	66	17	20	13	8	5	3
Textiles and their products	225	90	53	47	24	2	9
Leather and its manufactures	31	10	11	7	3		
Food and kindred products	118	40	30	26	15	3	4
Tobacco manufactures	1		1				
Paper and printing	64	22	13	9	15	4	1
Chemicals and allied products	32	11	9	5	7		
Rubber products	26	9	8	3	4	1	1
Miscellaneous manufacturing	67	17	18	13	14	3	2
Nonmanufacturing							
Extraction of minerals	50	29	8	6	4	2	1
Transportation and communication	104	54	23	18	5	3	1
Trade	164	69	41	29	17	4	4
Domestic and personal service	88	41	16	17	5	2	7
Professional service	17	11	2	3			1
Building and construction	183	92	45	29	14		3
Agriculture and fishing	10	4	3	2	1		
WPA and relief projects	2	1					1
Other nonmanufacturing industries	62	33	16	5	5	3	

Slightly more than half of the 1,890 strikes ending in the first 6 months of the year were settled with the assistance of Government officials or boards, and more than three-fourths of the total workers involved in strikes during the period obtained settlements through such assistance. Employers and union officials negotiating directly settled approximately one-third of the strikes which included 18 percent of the total workers involved. More than 11 percent of the strikes were terminated without formal settlements, the employees in most of these cases returning to work on employers' terms or in some cases they lost their jobs entirely through replacement or the permanent closing of the employers' business. The strikes terminating without formal settlements included 4 percent of the total workers involved (see table 9).

About 43 percent of the strikes ending in the period, January to June 1941, were successful from the standpoint of the workers involved, 35 percent were settled on a compromise basis, and nearly 14 percent resulted in little or no gains for the workers. Fifty-three percent of the total workers involved were connected with the successful strikes, 39 percent were included in the strikes which were

compromised, and only a little more than 4 percent were in the unsuccessful strikes (see table 10).

TABLE 9.—*Methods of Negotiating Settlements of Strikes Ending in the 6-Month Period, January to June 1941*

Settlement negotiations carried on by—	Strikes		Workers involved	
	Number	Percent of total	Number	Percent of total
Total	1,890	100.0	1,189,471	100.0
Employers and workers directly	39	2.1	5,054	.4
Employers and representatives of organized workers directly	635	33.6	218,873	18.4
Government officials or boards	980	51.8	916,353	77.1
Private conciliators or arbitrators	17	.9	1,775	.1
Terminated without formal settlement	218	11.5	47,290	4.0
Not reported	1	.1	126	(1)

[1] Less than a tenth of 1 percent.

TABLE 10.—*Results of Strikes Ending in the 6-Month Period, January to June 1941*

Result	Strikes		Workers involved	
	Number	Percent of total	Number	Percent of total
Total	1,890	100.0	1,189,471	100.0
Substantial gains to workers	819	43.3	631,320	53.0
Partial gains or compromises	664	35.1	461,288	38.8
Little or no gains to workers	261	13.8	49,467	4.2
Jurisdiction, rival union, or faction settlements	113	6.0	26,981	2.3
Indeterminate	20	1.1	19,066	1.6
Not reported	13	.7	1,349	.1

In table 11, results of the strikes ending in the first 6 months of the year are shown in relation to the major issues involved. The percentages indicate that about the same proportions (47 percent) of the wage-and-hour strikes and the union-organization strikes were successful from the workers' standpoint, while 43 percent of the wage-and-hour strikes were compromised as compared with 34 percent of the union-organization strikes, and only 10 percent of the wage-and-hour strikes were unsuccessful as compared with 18 percent of the union-organization strikes. In other words, although the proportion of successful strikes was about the same in the two groups, the tendency was toward compromises in the wage-and-hour strikes with a larger proportion of the union-organization strikes ending with little or no gains to workers.

Of the workers involved in wage-and-hour strikes about 57 percent were successful in gaining their demands, 40 percent obtained compromise settlements, and 3 percent gained little or nothing. In the union-organization strikes about 52 percent of the workers were successful, 41 percent obtained compromise settlements, and 6 percent were unsuccessful.

TABLE 11.—*Results of Strikes Ending in the 6-Month Period, January to June 1941, in Relation to Major Issues Involved*

Major issue	Total	Strikes resulting in—					
		Substantial gains to workers	Partial gains or compromises	Little or no gains to workers	Jurisdiction, rival union, or faction settlements	Indeterminate	Not reported
	Strikes						
All issues	1,890	819	664	261	113	20	13
Wages and hours	665	311	286	67	----------	1	----------
Union organization	955	454	321	169	----------	7	4
Miscellaneous	270	54	57	25	113	12	9
	Percentage distribution						
All issues	100.0	43.3	35.1	13.8	6.0	1.1	0.7
Wages and hours	100.0	46.7	43.0	10.1	----------	.2	----------
Union organization	100.0	47.6	33.6	17.7	----------	.7	.4
Miscellaneous	100.0	20.0	21.1	9.3	41.9	4.4	3.3
	Workers involved						
All issues	1,189,471	631,320	461,288	49,467	26,981	19,066	1,349
Wages and hours	722,204	410,575	291,168	20,261	----------	200	----------
Union organization	361,045	186,337	148,348	20,194	----------	6,011	155
Miscellaneous	106,222	34,408	21,772	9,012	26,981	12,855	1,194
	Percentage distribution						
All issues	100.0	53.0	38.8	4.2	2.3	1.6	0.1
Wages and hours	100.0	56.9	40.3	2.8	----------	(1)	----------
Union organization	100.0	51.6	41.1	5.6	----------	1.7	(1)
Miscellaneous	100.0	32.4	20.5	8.5	25.4	12.1	1.1

[1] Less than a tenth of 1 percent.

ACTIVITIES OF THE UNITED STATES CONCILIATION SERVICE, AUGUST 1941

THE United States Conciliation Service during August disposed of 626 situations, involving 477,045 workers. The services of this agency were requested by the employers, employees, and other interested parties (table 1). Of these situations, 181 were strikes and lock-outs involving 72,450 workers; 243 were threatened strikes and controversies involving 201,582 workers. Thirteen disputes were certified during the month to the National Defense Mediation Board, and jurisdiction was assumed by other agencies in 13 others. The remaining 176 situations included investigations, arbitrations, requests for information, consultations, etc.

The facilities of the Service were used in 28 major industrial fields, such as building trades, and the manufacture of foods, iron and steel, textiles, etc. (table 2), and were utilized by employees and employers in 43 States, the District of Columbia, and Hawaii (table 3).

TABLE 1.—*Situations Disposed of by U. S. Conciliation Service, August 1941, by Type of Situation*

Type of disputes	Number	Workers involved
All situations handled	626	477,045
Disputes	424	274,032
Strikes	177	72,065
Threatened strikes	157	89,007
Lock-outs	4	385
Controversies	86	112,575
Other situations	176	160,490
Investigations	52	55,169
Technical investigations and service	36	7,892
Arbitrations	25	23,808
Request for consent elections	2	195
Request for union membership verification	5	40
Request for information	13	25
Consultations	12	33
Special services of commissioners	13	73,285
Complaints	18	43
Disputes referred to other agencies during negotiations	26	42,523
To National Defense Mediation Board	13	38,438
To National Labor Relations Board	8	2,417
To other Federal agencies	2	190
To nongovernment agencies	2	278
To State agencies	1	1,200

TABLE 2.—*Situations Disposed of by U. S. Conciliation Service, August 1941, by Industries*

Industry	Disputes		Other situations		Total	
	Number	Workers involved	Number	Workers involved	Number	Workers involved
All industries	450	316,555	176	160,490	626	477,045
Automobile	14	43,201	1	2	15	43,203
Building trades	42	56,788	16	16,202	58	72,990
Chemicals	15	5,944	8	455	23	6,399
Communications	2	10,112			2	10,112
Domestic and personal	11	908	7	121	18	1,029
Electrical equipment	25	6,187	2	810	27	6,997
Food	24	8,099	13	1,660	37	9,759
Furniture	14	2,164	17	646	31	2,810
Iron and steel	80	31,228	11	29,785	91	61,013
Leather	2	2,660	8	2,707	10	5,367
Lumber	18	5,225	7	1,399	25	6,624
Machinery	28	6,493	3	154	31	6,647
Maritime	3	1,907	4	72,084	7	73,991
Mining	6	4,325	1	1	7	4,326
Motion picture	2	89			2	89
Nonferrous metals	22	27,720	1	2	23	27,722
Paper	10	2,609	3	808	13	3,417
Petroleum	6	962	9	99	15	1,061
Printing	2	78			2	78
Professional	1	3			1	3
Rubber	5	10,102	2	1,802	7	11,904
Stone, clay, and glass	21	8,609	6	360	27	8,969
Textile	29	22,004	13	4,955	42	26,959
Tobacco	1	22,000	1	145	2	22,145
Trade	12	2,321	9	1,344	21	3,665
Transportation	23	10,604	10	1,152	33	11,756
Transportation equipment	15	13,366	4	22,100	19	35,466
Utilities	9	9,715			9	9,715
Unclassified	8	1,132	20	1,697	28	2,829

TABLE 3.—*Situations Disposed of by U. S. Conciliation Service, August 1941, by States*

State	Disputes		Other situations		Total	
	Number	Workers involved	Number	Workers involved	Number	Workers involved
All States	450	316,555	176	160,490	626	477,045
Alabama	12	5,426	4	2,122	16	7,548
Arkansas	2	480	1	2	3	482
Arizona	2	410			2	410
California	25	6,232	4	1,060	29	7,292
Connecticut	5	2,555	1	100	6	2,655
Delaware	1	109			1	109
District of Columbia	4	2,527	9	72,198	13	74,725
Florida	20	40,840	5	66	25	40,906
Georgia	4	297			4	297
Hawaii	1	120			1	120
Illinois	31	17,529	13	497	44	18,026
Indiana	23	9,678	12	1,864	35	11,542
Iowa	3	776	2	201	5	977
Kansas	5	674	1	70	6	744
Kentucky	5	1,386	3	629	8	2,015
Louisiana	8	1,788	2	740	10	2,528
Maine	2	2,640			2	2,640
Massachusetts	4	2,490	16	4,200	20	6,690
Maryland	5	4,299	2	28,650	7	32,949
Michigan	51	63,515	7	121	58	63,636
Minnesota	8	1,554	5	951	13	2,505
Mississippi			3	375	3	375
Missouri	15	4,754	12	11,941	27	16,695
Montana	1	120	3	106	4	226
Nebraska	6	133			6	133
New Hampshire	1	120			1	120
New Mexico	4	2,275			4	2,275
New Jersey	12	3,502	2	505	14	4,007
New York	26	26,479	9	1,933	35	28,412
North Carolina	9	27,801	13	1,119	22	28,920
Ohio	45	16,555	5	3,800	50	20,355
Oklahoma	3	249			3	249
Oregon	8	845	3	102	11	947
Pennsylvania	43	33,676	12	1,834	55	35,510
Rhode Island	3	5,550			3	5,550
South Carolina	6	2,157	4	2,456	10	4,613
Tennessee	6	2,745	2	103	8	2,848
Texas	7	2,488	10	2,549	17	5,037
Utah	3	8,538			3	8,538
Vermont	1	180			1	180
Virginia	9	8,041	1	30	10	8,071
Washington	7	1,007	7	20,159	14	21,166
West Virginia	9	2,425	1	2	10	2,427
Wisconsin	5	1,590	1	4	6	1,594
Wyoming			1	1	1	1

ACTIVITIES OF NATIONAL DEFENSE MEDIATION BOARD, AUGUST AND SEPTEMBER 1941

FOURTEEN cases were certified to the National Defense Mediation Board in August and 10 in September 1941, bringing the total to 81 since the Board was established. In addition, under the bituminous-coal certification of last April, the Board took jurisdiction over 2 new disputes in the industry during September; and in 2 other cases, which had been under investigation, hearings were resumed in September. The status of cases handled in this 2-month period, including those remaining unsettled at the end of July, is shown in the following table, with the 4 cases specially mentioned listed at the end.

Status of National Defense Mediation Board Cases on September 30, 1941

Case	Date of strike	Number of men involved	Date certified to Board	Date of back-to-work agreement or strike postponement	Date issues settled
Duquesne Light Co	[1]	312	June 18	June 19	Aug. 7
Western Cartridge Co	[1]	4,500	June 24	June 25[2]	[2]July 29
Federal Shipbuilding Corporation	Aug. 7	16,000	June 30	Aug. 25	[3]
Armour & Co	[1]	14,000	July 26	July 28	Aug. 8
Borg-Warner Corporation	Aug. 21	868	July 26	Aug. 28	Aug. 27
Aluminum Co. of America (Los Angeles)	[1]	1,750	July 28	July 29	Aug. 7
Lincoln Mills	[1]	1,800	July 28	July 29	
Ohio Brass Co. (Barbeton plant)	June 10	1,300	Aug. 1	Sept. 16	
Erwin Cotton Mills	[1]	2,000	Aug. 6	Aug. 7	Aug. 22
U. S. Gypsum Co. (17 plants)	June 26	3,000	Aug. 6	Sept. 2	
Consolidated Edison Co. of New York	July 29	6,500	Aug. 7	Aug. 11	
Todd Galveston Drydocks, Inc	July 15	1,850	Aug. 7	Aug. 11	Aug. 16
Rockford Drop Forge Co	[1]	300	Aug. 9	Aug. 11	Aug. 21
Curtiss-Wright Corporation	Aug. 8	740	Aug. 13	Aug. 14	Sept. 5
Solvay Process Co., Inc	Aug. 30	275	Aug. 15	Aug. 16	
Aluminum Co. of America (Pittsburgh)	[1]	18,925	Aug. 16		
Pacific States Cast Iron Pipe Co	[4]	438	Aug. 18	Aug. 19	Sept. 10
American Car & Foundry Co	July 10	600	Aug. 19	Aug. 22	Aug. 30
Pullman Standard Car Mfg. Co. (Bessemer)	Aug. 11	1,150	Aug. 21	Aug. 25	Sept. 4
Henry Vogt Machine Co	Aug. 11	1,000	Aug. 22	Sept. 5	Sept. 3
Pullman Standard Car Mfg. Co. (Michigan City)	Aug. 17	1,800	Aug. 26	Sept. 13	Sept. 10
Aluminum Co. of America (Vancouver)	[1]	730	Sept. 3	Sept. 4	
Kansas City Power & Light Co	Sept. 16	350	Sept. 5	Sept. 18	
Pressed Steel Car Co	Aug. 29	2,600	Sept. 5	Sept. 8	
Lamson & Sessions Co	[1]	1,000	Sept. 6	Sept. 7	Sept. 20
American Brake Shoe & Foundry Co	July 28	440	Sept. 10	Sept. 24	
Duquesne Light Co. and Curtiss-Wright Corporation	Sept. 10	364	Sept. 11	Sept. 24	Sept. 19
Bendix Aviation Corporation	[1]	8,400	Sept. 15		
Hendey Machine Co	Sept. 5	1,429	Sept. 18	Sept. 22	
Shipowners, Seafarers International Union and Sailors Union of the Pacific	Sept. 13	20,000	Sept. 23	Sept. 24	
Consolidated Aircraft Corporation	[1]	27,000	Sept. 24		
Alabama coal mines	Sept. 3	22,500	Apr. 24	Sept. 6	
Captive coal mines	Sept. 15	43,178	Apr. 24	Sept. 22	
Breeze Corporations, Inc	Sept. 15	1,600	July 12	Sept. 16	
Air Associates, Inc	Sept. 30	525	July 17		

[1] Postponed at request of Board.
[2] As noted, the case was settled on July 29 but this was not shown in the August issue of the Monthly Labor Review (p. 472) and the case is therefore listed again.
[3] Government took over plant on August 24
[4] Returned to work at request of Board.

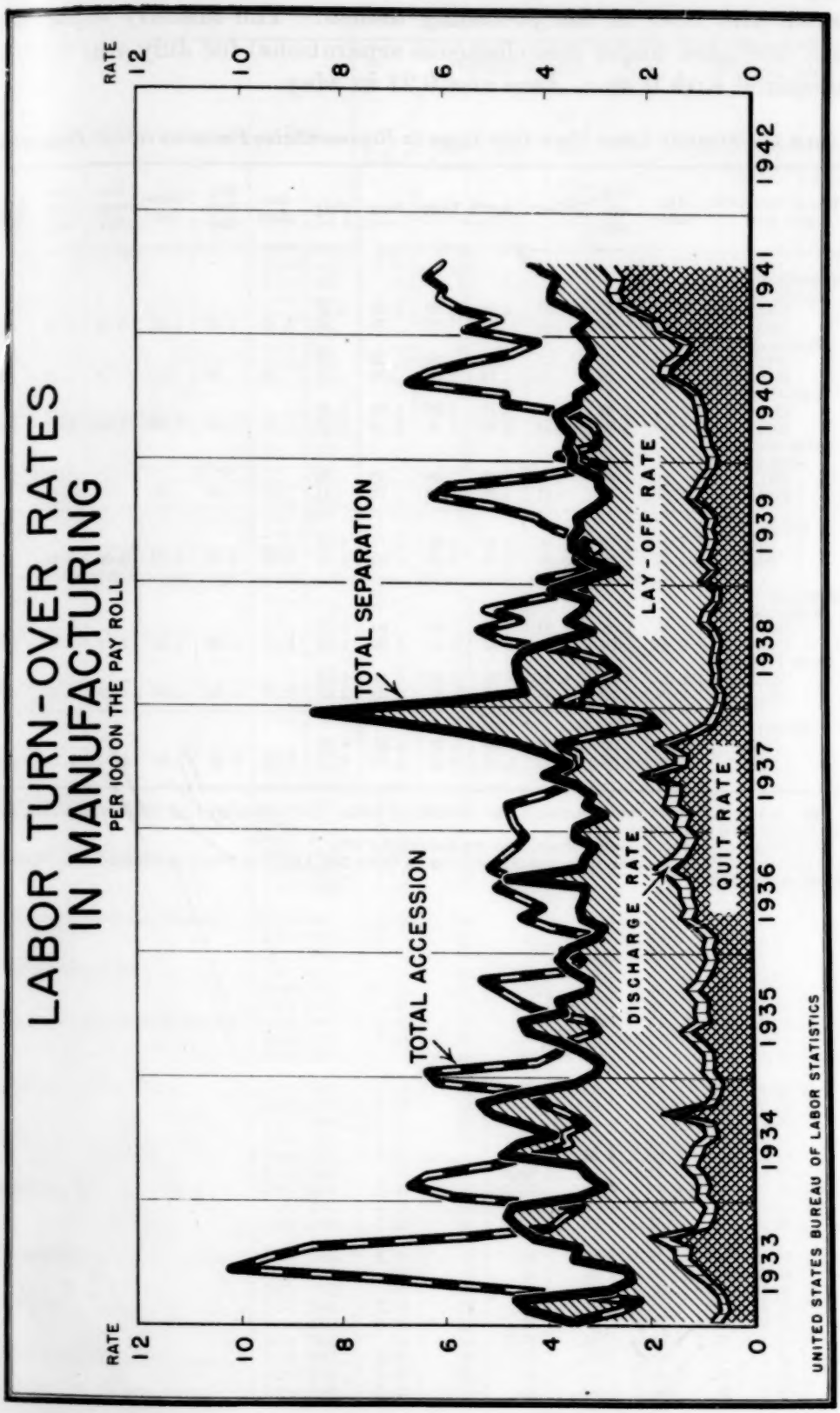
Labor Turn-Over

LABOR TURN-OVER IN MANUFACTURING, JULY 1941

MANUFACTURING plants reported a decline in the total hiring rate in July 1941 from the high level established in June. The Bureau of Labor Statistics' monthly survey of labor turn-over, covering 7,500 plants employing 3,600,000 workers, showed that accessions amounted to 6.00 per 100 workers on the pay roll in July, as compared with 6.31 in June and 4.77 in July 1940. Decreases in the rate of accessions were reported by a major portion of the industries covered, with the greatest declines in construction materials, rubber boots and shoes, and tires and inner tubes. The primary defense industries, on the other hand, reported higher accession rates as a result of continued expansion in production schedules. The hiring rate for shipbuilding rose from 12.12 in June to 15.53 in July, while that for aircraft increased from 10.77 to 12.68.

Lay-offs rose substantially in July from the record low level of June (1.03), the rate for all manufacturing in July amounting to 1.40 per 100 employees. The principal factor in this increase in lay-offs was the close of the 1941 model year in the automobile industry. The lay-off rate in automobiles and bodies increased from 2.13 in June to 14.34 in July. Automobile parts and equipment showed an increase in lay-offs from 4.15 to 5.46 per 100 employees. Other industries which reported an increase in lay-offs because of seasonal reduction in automobile output were die castings (brass, bronze, and copper products), glass, and hardware. Shortages of raw materials again caused lay-offs in the aluminum-ware industry.

The quit rate for all manufacturing industries combined showed a slight increase from June to July and was nearly three times greater than in July 1940. The rise in the quit rates in some industries reflected a continued demand for workers and the attempt of workers to secure employment at higher wage levels or better working conditions. In other industries it represented an attempt of workers to find new employment rather than to suffer lay-offs caused by priority rulings limiting the use of strategic materials in nondefense production. The discharge rate of 0.29 for all manufacturing was slightly higher than that reported in June and nearly twice as great as the


LABOR TURN-OVER RATES
IN MANUFACTURING
PER 100 ON THE PAY ROLL
RATE
12
10
8
6
4
2
0
TOTAL SEPARATION
TOTAL ACCESSION
DISCHARGE RATE
QUIT RATE
LAY-OFF RATE
1933
1934
1935
1936
1937
1938
1939
1940
1941
1942
UNITED STATES BUREAU OF LABOR STATISTICS

July 1940 rate. Miscellaneous separations declined to 0.30 as compared with 0.36 in the preceding month. The military separation rate (included under miscellaneous separations) for July was 0.19, as compared with 0.26 in June and 0.21 in May.

TABLE 1.—*Monthly Labor Turn-Over Rates in Representative Factories in 135 Industries*[1]

Class of turn-over and year	January	February	March	April	May	June	July	August	September	October	November	December	Average
Separations:													
Quits:													
1941	1.31	1.33	1.70	2.08	2.20	2.06	2.25						
1940	.63	.62	.67	.74	.77	.78	.85	1.10	1.37	1.31	1.10	0.99	0.91
Discharges:													
1941	.18	.19	.21	.25	.24	.26	.29						
1940	.14	.16	.15	.13	.13	.14	.14	.16	.16	.19	.18	.16	.15
Lay-offs:[2]													
1941	1.61	1.20	1.06	1.19	1.08	1.03	1.40						
1940	2.55	2.67	2.53	2.69	2.78	2.32	2.25	1.63	1.48	1.53	1.60	1.86	2.16
Miscellaneous separations:													
1941	.31	.43	.43	.37	.34	.36	.30						
1940[3]	.11	.11	.11	.10	.10	.12	.11	.11	.21	.20	.18	.15	.13
Total:													
1941	3.41	3.15	3.40	3.89	3.86	3.71	4.24						
1940	3.43	3.56	3.46	3.66	3.78	3.36	3.35	3.00	3.22	3.23	3.06	3.16	3.35
Accessions:													
Rehirings:													
1941	1.45	1.08	1.24	1.04	.92	.90	1.04						
1940	1.96	1.26	1.38	1.42	1.49	2.06	1.94	3.04	2.20	1.22	1.18	1.13	1.69
New hirings:													
1941	4.09	3.84	4.38	5.00	5.03	5.41	4.96						
1940	1.78	1.72	1.56	1.63	1.87	2.70	2.83	3.59	4.01	4.30	3.47	2.98	2.70
Total:													
1941	5.54	4.92	5.62	6.04	5.95	6.31	6.00						
1940	3.74	2.98	2.94	3.05	3.36	4.76	4.77	6.63	6.21	5.52	4.65	4.11	4.39

[1] The various turn-over rates represent the number of quits, discharges, lay-offs, total separations, and accessions per 100 employees.
[2] Including temporary, indeterminate, and permanent lay-offs.
[3] Beginning with September 1940, workers leaving to enter the Army or Navy are included in "miscellaneous separations."

TABLE 2.—*Monthly Turn-Over Rates (per 100 Employees) in 39 Manufacturing Industries* [1]

Industry	Date	Separation rates					Accession rates		
		Quit [2]	Discharge	Layoff	Miscellaneous separation [2]	Total separation	Rehiring	New hiring	Total accession
Agricultural implements	July 1941	1.24	0.23	0.71	0.28	2.46	0.51	2.75	3.26
	June 1941	1.05	.25	.75	.29	2.34	.49	2.91	3.40
	July 1940	.50	.12	2.18	.10	2.90	1.36	1.73	3.09
Aircraft [3]	July 1941	2.48	.47	.19	.22	3.36	.20	12.48	12.68
	June 1941	2.33	.33	.32	.23	3.21	.24	10.53	10.77
	July 1940	2.96	.44	.15	.02	3.57	.15	12.25	12.40
Aluminum	July 1941	2.09	.25	1.72	.60	4.66	2.36	2.97	5.33
	June 1941	2.44	.64	3.08	1.08	7.24	.33	4.14	4.47
	July 1940	.80	.05	1.30	.47	2.62	3.60	1.65	5.25
Automobiles and bodies	July 1941	1.91	.18	14.34	.50	16.93	2.70	2.64	5.34
	June 1941	1.81	.13	2.13	.88	4.95	1.02	3.36	4.38
	July 1940	.48	.05	22.22	.04	22.79	7.49	1.25	8.74
Automobile parts and equipment	July 1941	1.96	.46	5.46	.35	8.23	1.75	4.32	6.07
	June 1941	1.98	.40	4.15	.43	6.96	.65	5.14	5.79
	July 1940	.80	.25	8.33	.07	9.45	5.74	3.36	9.10
Boots and shoes	July 1941	1.98	.19	.76	.16	3.09	.85	4.00	4.85
	June 1941	1.89	.14	.74	.25	3.02	1.52	4.71	6.23
	July 1940	.72	.14	1.05	.05	1.96	2.43	2.00	4.43
Brass, bronze, and copper products	July 1941	2.54	.36	1.11	.41	4.42	1.31	4.31	5.62
	June 1941	2.03	.33	.49	.43	3.28	.41	4.98	5.39
	July 1940	.79	.07	.77	.11	1.74	1.73	3.85	5.58
Brick, tile, and terra cotta	July 1941	2.56	.34	1.10	.23	4.23	.41	4.99	5.40
	June 1941	2.22	.23	1.10	.34	3.87	.89	6.99	7.88
	July 1940	.87	.14	2.98	.05	4.04	1.58	2.29	3.87
Cast-iron pipe	July 1941	1.45	.46	.23	.20	2.34	.96	2.94	3.90
	June 1941	1.48	.35	.28	.24	2.35	1.97	3.26	5.23
	July 1940	.40	.08	.04	.03	.55	.14	3.33	3.47
Cement	July 1941	1.10	.15	.44	.26	1.95	.33	4.27	4.60
	June 1941	.98	.12	.23	.37	1.70	.33	4.81	5.14
	July 1940	.33	.11	1.50	.24	2.18	4.50	1.80	6.30
Cigars and cigarettes	July 1941	3.11	.38	.81	.20	4.50	.66	3.57	4.23
	June 1941	2.45	.11	1.19	.18	3.93	.65	4.22	4.87
	July 1940	1.27	.07	1.58	.12	3.04	.61	1.32	1.93
Cotton manufacturing	July 1941	3.96	.36	.72	.31	5.35	1.09	5.10	6.19
	June 1941	3.70	.36	.75	.30	5.11	1.38	5.33	6.71
	July 1940	1.40	.17	2.29	.13	3.99	2.06	2.26	4.32
Dyeing and finishing textiles	July 1941	3.29	.38	.69	.25	4.61	1.25	5.42	6.67
	June 1941	3.71	.29	.45	.39	4.84	1.33	5.53	6.86
	July 1940	.75	.16	.52	.12	1.55	1.71	1.70	3.41
Electrical machinery	July 1941	1.61	.32	.33	.46	2.72	.34	6.02	6.36
	June 1941	1.62	.22	.38	.73	2.95	.34	7.00	7.34
	July 1940	.68	.10	.90	.18	1.86	1.71	3.04	4.75
Foundries and machine shops	July 1941	2.55	.46	.75	.27	4.03	.58	6.16	6.74
	June 1941	2.44	.46	.85	.39	4.14	.49	6.63	7.12
	July 1940	.71	.13	.99	.08	1.91	1.04	2.84	3.88
Furniture	July 1941	3.55	.45	.88	.38	5.26	.97	6.38	7.35
	June 1941	3.49	.48	.69	.42	5.08	.99	7.51	8.50
	July 1940	.97	.23	1.95	.09	3.24	2.14	2.97	5.11
Glass	July 1941	1.32	.13	2.04	.26	3.75	.63	3.90	4.53
	June 1941	1.21	.16	1.21	.36	2.94	.88	3.84	4.72
	July 1940	.51	.10	3.63	.14	4.38	2.34	2.23	4.57
Hardware	July 1941	3.90	.44	1.14	.30	5.78	.40	5.46	5.86
	June 1941	3.16	.36	.49	.41	4.42	.63	5.39	6.02
	July 1940	1.29	.08	1.36	.12	2.85	.90	3.00	3.90
Iron and steel	July 1941	1.18	.12	.20	.36	1.86	.56	2.97	3.53
	June 1941	.99	.13	.19	.48	1.79	.53	3.44	3.97
	July 1940	.59	.08	.38	.15	1.20	1.35	2.56	3.91
Knit goods	July 1941	2.86	.33	.89	.16	4.24	.87	5.16	6.03
	June 1941	2.20	.24	.74	.23	3.41	.85	3.59	4.44
	July 1940	.84	.14	1.91	.06	2.95	1.83	1.34	3.17
Machine tools	July 1941	2.02	.50	.12	.15	2.79	.13	5.04	5.17
	June 1941	1.97	.51	.15	.19	2.82	.38	5.90	6.28
	July 1940	1.28	.54	.21	.06	2.09	.16	2.89	3.05

[1] No individual industry data shown unless reports cover at least 25 percent of industrial employment.
[2] Beginning with September 1940, workers leaving to enter the Army or Navy are included in "miscellaneous separations."
[3] Not including aero-engines.

TABLE 2.—*Monthly Turn-Over Rates (per 100 Employees) in 39 Manufacturing Industries*—Continued

Industry	Date	Separation rates					Accession rates		
		Quit	Discharge	Lay-off	Miscellaneous separation	Total separation	Rehiring	New hiring	Total accession
Men's clothing	July 1941	1.91	0.18	0.91	0.11	3.11	1.22	3.43	4.65
	June 1941	1.70	.16	1.31	.13	3.30	.98	3.32	4.30
	July 1940	.86	.20	3.35	.07	4.48	4.34	1.84	6.18
Paints and varnishes	July 1941	1.82	.28	.90	.33	3.33	.22	3.85	4.07
	June 1941	1.69	.28	.62	.32	2.91	.29	4.86	5.15
	July 1940	.75	.25	.85	.07	1.92	1.15	2.51	3.66
Paper and pulp	July 1941	1.43	.34	.53	.29	2.59	.31	3.93	4.24
	June 1941	1.43	.31	.72	.35	2.81	.31	4.68	4.99
	July 1940	.50	.15	.64	.17	1.46	.72	2.01	2.73
Petroleum refining	July 1941	.49	.04	.42	.26	1.21	.48	1.87	2.35
	June 1941	.49	.06	.66	.40	1.61	.30	3.62	3.92
	July 1940	.40	.05	.93	.06	1.44	.37	1.20	1.57
Planing mills	July 1941	3.22	.46	1.00	.29	4.97	2.78	5.60	8.38
	June 1941	2.72	.33	3.49	.42	6.96	.81	6.21	7.02
	July 1940	1.14	.21	1.84	.02	3.21	.53	4.06	4.59
Printing: Book and job	July 1941	1.60	.15	1.87	.23	3.85	1.68	4.40	6.08
	June 1941	1.64	.27	2.62	.29	4.82	1.21	5.00	6.21
	July 1940	.50	.06	3.02	.07	3.65	1.82	1.92	3.74
Printing: Newspapers and periodicals	July 1941	.65	.43	1.86	.18	3.21	.55	1.19	1.74
	June 1941	.73	.05	.92	.18	1.88	.60	1.38	1.98
	July 1940	.44	.02	1.45	.05	1.96	.66	.60	1.26
Radios and phonographs	July 1941	2.73	.30	.56	.14	3.73	3.38	5.10	8.48
	June 1941	3.07	.24	1.30	.21	4.82	1.05	5.90	6.95
	July 1940	1.66	.13	1.05	.03	2.87	2.48	6.39	8.87
Rayon and allied products	July 1941	.80	.17	.23	.31	1.51	.41	2.54	2.95
	June 1941	.92	.20	.58	.45	2.15	.49	3.04	3.53
	July 1940	.59	.11	.56	.03	1.29	.56	1.83	2.39
Rubber boots and shoes	July 1941	2.67	.20	.37	.39	3.63	.43	4.76	5.19
	June 1941	3.23	.22	.22	.90	4.57	1.06	7.35	8.41
	July 1940	.85	.07	.87	.20	1.99	1.76	1.25	3.01
Rubber tires	July 1941	1.39	.13	.74	.40	2.66	.40	3.68	4.08
	June 1941	1.30	.12	.43	.50	2.35	.43	5.60	6.03
	July 1940	.42	.04	2.00	.13	2.59	.96	1.88	2.84
Sawmills	July 1941	3.61	.36	1.43	.32	5.72	1.29	6.43	7.72
	June 1941	2.89	.35	1.10	.29	4.63	1.87	5.78	7.65
	July 1940	1.26	.17	1.45	.09	2.97	2.15	3.60	5.75
Shipbuilding	July 1941	2.65	.59	2.05	.34	5.63	2.58	12.95	15.53
	June 1941	2.37	.45	2.71	.47	6.00	2.52	9.60	12.12
	July 1940	1.14	.48	3.71	.07	5.40	1.86	11.14	13.00
Silk and rayon goods	July 1941	2.80	.29	.85	.14	4.08	.99	3.68	4.67
	June 1941	3.35	.17	1.06	.25	4.83	1.16	4.50	5.66
	July 1940	.77	.13	1.70	.08	2.68	4.20	2.81	7.01
Slaughtering and meat packing	July 1941	1.68	.26	6.63	.40	8.97	5.20	4.58	9.78
	June 1941	1.60	.25	4.92	.45	7.22	4.05	6.54	10.59
	July 1940	.61	.15	6.07	.19	7.02	4.38	3.03	7.41
Steam and hot-water heating apparatus	July 1941	4.16	.48	.18	.49	5.31	1.70	5.71	7.41
	June 1941	3.18	.42	.21	.34	4.15	.46	5.33	5.79
	July 1940	.96	.18	.46	.10	1.70	1.05	5.70	6.75
Structural and ornamental metal work	July 1941	2.17	.34	1.21	.35	4.07	.25	5.54	5.79
	June 1941	2.16	.31	.49	.47	3.43	.80	5.74	6.54
	July 1940	1.03	.06	3.78	.16	5.03	2.79	5.49	8.28
Woolen and worsted goods	July 1941	3.59	.28	.59	.27	4.73	1.21	5.22	6.43
	June 1941	3.10	.19	.57	.25	4.11	1.20	4.41	5.61
	July 1940	1.24	.10	2.23	.12	3.69	2.35	6.14	8.49

Wage and Hour Regulation

40-CENT MINIMUM FOR WOMEN'S AND CHILDREN'S GARMENT INDUSTRY [1]

EMPLOYEES engaged in the manufacture of women's and children's garments are to receive at least 40 cents an hour effective September 29, 1941, under a wage order issued by the Administrator of the Fair Labor Standards Act. This rate of pay applied in the manufacture of women's coats, suits, and separate skirts from the effective data of the original apparel order on July 15, 1940.[2] The new minimum was expected to increase the hourly wage rates of 60,000 of the 240,000 workers engaged in producing women's, misses', and juniors' dresses, washable service garments, blouses, and neckwear from woven or purchased knit fabric; women's, misses', children's, and infants' underwear, nightwear, and negligees from woven fabric; corsets and other body-supporting garments from any material; other garments similar to the foregoing and infants' and children's outerwear.

40-CENT MINIMUM FOR MANUFACTURE OF MEN'S SHIRTS AND ALLIED GARMENTS [3]

A MINIMUM wage of 40 cents an hour became effective in the men's shirts, single pants, and allied garment industries, on September 29, 1941, under the terms of a wage order issued by the Administrator of the Fair Labor Standards Act. As a result of this action, 89,000 workers, mostly woman sewing-machine operators, were expected to receive increases. The 40-cent rate supersedes the 32½-cent hourly minimum established by an earlier order.[4]

Regulations governing the employment of learners in the same branches of industry were adopted at the same time. Bona fide learners in stitching, pressing, and hand sewing may be employed at 25 cents an hour for 8 weeks and at 32½ cents an hour for an additional 4 weeks. A 4-week training period at 30 cents an hour is fixed for a number of less skilled occupations such as trimming, examining,

[1] U. S. Department of Labor. Wage and Hour Division. Press release No. 1557, August 29, 1941.
[2] For the terms of the order, see Monthly Labor Review for September 1940 (p. 554).
[3] U. S. Department of Labor. Wage and Hour Division. Press release No. 1546, August 26, 1941.
[4] See Monthly Labor Review for September 1940 (p. 554).

cleaning, bundling, assembling, assorting, folding, clipping, boxing, and floor work. Formerly, employees in the last-named occupations were not subject to subminimum rates.

34-CENT MINIMUM FOR CLAY-PRODUCTS INDUSTRY [1]

A MINIMUM wage of 34 cents an hour was established, effective September 1, 1941, for the clay-products industry by order of the Administrator of the Fair Labor Standards Act. This minimum applies to workers engaged in the manufacture of all fired clay products except refractories, pottery, and ceramic whiteware.

In adopting the 34-cent rate the Administrator followed the recommendation of the majority of the members of the industry committee which investigated economic and competitive conditions in clay-products manufacture. It was estimated that approximately 3,900 workers in 14 Southern States would receive wage increases as a result of the order. Few workers are paid less than 40 cents an hour in brick factories in other sections of the country.

WAGE ORDER FOR SEVEN INDUSTRIES IN PUERTO RICO

RECOMMENDATIONS of a special industry committee for Puerto Rico for minimum-wage rates in seven industries—cigarette; cigar; full-fashioned hosiery; hair net; mattress, quilt and pillow; bay oil, bay rum, and aromatic alcohol; and raffia handbag—were approved by the Administrator of the Wage and Hour Division, to be effective May 19, 1941.[2] The recommendation of the industry committee for a minimum rate of 27½ cents in the ocean-pearl-button industry was not approved. In disapproving the recommendation for this industry, the Administrator stated that the recommended minimum did not conform with the statutory requirement that any minimum so recommended must be the highest which will not substantially curtail employment in such industry. For the fiscal year 1939–40, the average wage paid in the industry was 33.1 cents.

The wage order established a 25-cent minimum hourly rate payable by every employer engaged in commerce or in the production of goods for commerce in the cigarette; cigar; full-fashioned hosiery; hair net; mattress, quilt, and pillow; and bay oil, bay rum, and aromatic-

[1] U. S. Department of Labor. Wage and Hour Division. Press releases Nos. 1530 and 1531, August 15, 1941.

[2] Idem, press releases G–163 (May 12, 1941), R-1408 (May 15, 1941), and R-1410 (Mar 14, 1941).

alcohol industries. For the raffia handbag industry, 12½ cents an hour was fixed for hand-sewing operations and 20 cents an hour for other operations.

REGULATION OF COMPANY STORES AND WAGES IN BOLIVIAN MINING INDUSTRY, 1940 [1]

BY DECREE of June 20, 1940, mining enterprises in Bolivia were given the choice, in their company stores, between selling articles at 30 percent below cost (under 1937 legislation) or at cost plus 10 percent for administration expenses and wastage, with an accompanying increase in wages. The increase in wages must be equal at least to compensation for the rise in prices of articles purchased in company stores.

Enterprises electing to adopt the higher scale of prices are to communicate with the Ministry of Labor and Social Welfare in order to ascertain the methods for determining the amount of the increase in pay. The minimum daily wages for miners shall be as follows: For women and workers under 18 years, 8 bolivianos; for workers over 18 years of age, 12 bolivianos; and for laborers outside the mines, 10 bolivianos. For purposes of social-insurance deductions, the wage increases shall be added to the former wages.

Administration of this legislation is entrusted to the Ministers of Labor and Social Welfare, and of Commerce and Industry.

A below-cost scheme was formerly tried in company stores of railway enterprises, but was abandoned in 1938. The reasons for the adoption of 1940 legislation for mining enterprises were that the former system had resulted in a form of rationing which did not meet the needs of the workers and yet drove out free enterprise in the form of small stores in the vicinity of the mines; that it had not taken into account the entire remuneration of the workers for social-insurance deductions; that through its operation governmental procedure in issuing general wage regulations for the entire country was rendered difficult. Furthermore, the technical commission sent by the International Labor Office recommended the suppression of the system of sale below cost of articles in company stores.

Adoption of the higher scale of prices under the 1940 legislation carries with it the abolition of every sort of rationing in the company stores. The Ministry of Labor and Social Welfare is to approve the list of articles deemed as of prime necessity, and these must be kept on sale throughout the year.

[1] Bolivia. Boletín del Despacho de Previsión Social del Ministerio del Trabajo y Previsión Social, La Paz, June 1940, pp. 262–264.

STRONGER 8-HOUR LAW FOR COMMERCE IN EL SALVADOR, 1941 [1]

COMMERCIAL houses in El Salvador of specified classes are not permitted to open for business before 7 a. m. or to remain open after 7 p. m., according to a law passed by the National Legislative Assembly and effective on the day of publication, August 7, 1941. All such establishments must close between noon and 1:30 p. m. each day, Monday through Friday, and must close at 1 p. m. on Saturday and remain closed Saturday afternoon and Sunday. No employee may be required to work more than 8 hours daily. Violations are punishable by a fine of 200 colones.

The classes of establishments covered by the law include all commercial establishments except pharmacies, gasoline service stations, barber shops, beauty parlors, newsstands, and the like.

A law providing for an 8-hour working day for employees of all commercial houses has been in force since 1927, but violations had been general in recent years, and the 1941 legislation, the proposal for which originated in the local chamber of commerce, is intended to strengthen the provisions of already existing law.

RESTRICTIONS ON WAGES AND PROFITS IN IRELAND

BOTH wages and profits are subject to restrictions under the terms of an emergency order (No. 83) adopted by the Government of Ireland in May 1941.[2] By this means the Minister of Finance stated, it is hoped to secure, as far as possible, equality of sacrifice and maximum assurance that no section of the community can accumulate profits at the expense of another.

Part 1 of the order limits companies in the payment of ordinary dividends, the creation of shares or debentures, the alteration of articles of association, and the payment of fees. A company is covered if it falls within the meaning of the Companies Acts, 1908 to 1924 (other than a private company within the meaning of those acts or a company without a share capital) or if the company is incorporated by any act or by charter.

Companies subject to the order may not distribute dividends for any post-appointed-date accounting period in excess of any of the following: (1) The highest amount previously distributed; (2) an amount calculated at the rate of 6 percent on all paid-up ordinary share capital at the end of the accounting period; or (3) an amount which if added to the amount of the distribution (if any) made as an

[1] Data are from report of Overton G. Ellis, Jr., United States vice consul at San Salvador, El Salvador.
[2] Data are from reports Nos. 169 and 178 from David Gray, United States consul at Dublin.

ordinary dividend in a previous period would be equal to the sum of (*a*) 6 percent on all paid-up ordinary share capital at the end of the previous post-appointed-date accounting period and (*b*) an amount calculated at 6 percent on all paid-up ordinary share capital of the company at the end of the post-appointed-date accounting period for which the distribution is to be made.

Part 2 of the order deals with restrictions on increased remuneration of employees 14 years of age and over. By declaration of the Minister for Industry and Commerce specific employments listed in a schedule attached to the order are subject to control. The businesses and industries include shipping, transport, public utilities, banking, insurance, manufacturing, and coal mining, with specific exclusions. The Minister is also empowered to declare that any employment covered shall cease to be a scheduled employment subject to wage restriction. He may also determine that persons employed in any scheduled employment shall be an excluded class for the purpose of the order.

Regardless of the method by which the employee's wage is determined, in general, he may not be paid at a higher rate than he is receiving on the date when the order becomes effective in his employment. If his wages are fixed by statute or collective agreement, he is entitled to the minimum rate of pay or the amount he was receiving on the effective date of the order, whichever is greater. Workers hired after the operative date of the order may not be paid more than employees who were doing similar work on the effective date.

Where wages consist in part of a bonus, adjusted according to changes in the cost of living, the amount of the increment payable after the effective date of the order may not exceed the amount calculated on the basis of the cost-of-living figure on the date when the order goes into effect. Similarly, the employer who pays the income tax for his employee, in accordance with a contract of employment or established practice, may not contribute a sum in excess of that payable under the standard rate of 1940–41, even though the tax rate may be increased.

Nothing in this order is to be construed as preventing the payment of annual or other increases in wages provided for by contract or custom, granting higher wages on promotion, or extra pay for extra work.

Conditions may be laid down by the Minister on records to be kept and in what places. Employers must produce these records from time to time for inspectors and give them any pertinent information they may reasonably request. Inspectors under this order are appointees of the Minister.

The provisions of the trade boards laws of 1909 and 1918, dealing with the right of a board to fix, cancel, or vary minimum rates of wages, are suspended. This does not affect minimum-wage rates that were obligatory immediately before the order came into force; such rates are to be continued. The same applies to apprentice's rates of pay (other than for overtime).

Contemplation or furtherance of a strike calculated to cause an employer to contravene the provisions of the present order after it comes into effect is prohibited.

Wage and Hour Statistics

EARNINGS AND HOURS IN CORDAGE AND TWINE INDUSTRY, SEPTEMBER 1940 [1]

Summary

EMPLOYEES in the cordage and twine industry earned an average of 46.8 cents per hour in September 1940, exclusive of extra payments for overtime work. At the time of the survey by the Bureau of Labor Statistics, the legal minimum wage under the Fair Labor Standards Act was 32.5 cents an hour. Subsequently the legal minimum was raised to 37.5 cents, effective on June 30, 1941.

Only two-tenths of 1 percent of the workers earned less than the legal minimum of 32.5 cents an hour, but nearly one-sixth (15.8 percent) of the workers earned exactly that amount. An additional 15.2 percent earned more than 32.5 cents but less than 37.5 cents, making a total of nearly one-third (31.2 percent) of the workers who formerly earned less than the present legal minimum. One third (34.4 percent) of the workers earned 37.5 cents but less than 50.0 cents and another third (34.4 percent) earned 50.0 cents or more.

Almost half of the workers covered by the Bureau's study were employed in cotton-cordage mills, with average earnings of only 39.7 cents; a majority of these mills were in the South. Employees of other soft-fiber mills had average earnings of 50.6 cents and workers engaged in the production of hard-fiber cordage averaged 55.9 cents an hour. Most of these latter types of mills are in the North. The earnings of male workers were substantially higher than those of females.

Description of the Industry

The manufacture of cordage and twine was the earliest division of the American textile industry to become established on a commercial, factory basis. The first colonial rope walk was set up in Boston in 1642 by John Harrison, an English rope maker. Harrison's hempen rope, as well as the product of his competitors and successors, found its principal use in the rigging of ships for the colonies' rapidly growing merchant marine. By 1810, when the merchant navy of the United

[1] Prepared by Louis M. Solomon, with the assistance of Toivo P. Kanninen, of the Bureau's Division of Wage and Hour Statistics. The study was supervised by H. E. Riley.

States was approaching its zenith, 173 rope walks were in operation. In number of establishments the industry was then larger than it has been at any subsequent time.

The modern industry as surveyed in September 1940, was defined by the Bureau of Labor Statistics as including establishments engaged primarily in the manufacture of rope, cable cordage, and twine from hemp, cotton, manila, and all other fibers except paper.[2] Except for the exclusion of paper cordage, this definition is essentially the same as the one used by the United States Census of Manufactures.

According to preliminary census reports, the cordage and twine industry in 1939 consisted of 116 establishments and provided employment for 12,096 workers. The industry's output for that year was valued at approximately $57,000,000 and wage payments aggregating about $15,000,000 were made to its employees.

Census data on the geographical distribution of plants and employees are not available for periods later than 1937. However, the sample used in the study (see table 1) was selected with care and is believed to present a dependable picture of the geographical distribution of the industry. Reference to this table indicates that the original maritime uses of cordage still make their influence felt in the location of the establishments in the industry, most of which are situated in the States along the Atlantic, Pacific, and Gulf coasts. The manufacture of cordage for agricultural and industrial enterprises, however, has resulted in the establishment of a small number of plants in such inland States as Illinois, Ohio, and Kentucky.

TABLE 1.—*Regional Distribution of Mills and Employees Included in Survey of Cordage and Twine Industry, September 1940*

State	Number of mills	Number of employees	Percentage of employees
United States	43	5,299	100.0
North	27	2,813	53.1
Connecticut	3	44	.8
Massachusetts	6	943	17.8
New Jersey	3	520	9.8
New York	6	672	12.7
Pennsylvania	3	268	5.1
Other States [1]	6	366	6.9
South	16	2,486	46.9
Georgia	3	370	7.0
North Carolina	4	745	14.1
Other States [2]	9	1,371	25.8

[1] Includes 1 mill in California, 1 in Illinois, 1 in Rhode Island, 1 in Wisconsin, and 2 in Ohio.
[2] Includes 1 mill in Kentucky, 1 in Louisiana, 1 in Maryland, 1 in South Carolina, 1 in Tennessee, 1 in Texas, 1 in Virginia, and 2 in Alabama.

The various hard and soft fibers used in the manufacture of cordage possess distinctive physical properties and require special equipment in the manufacturing processes. Hence, the industry has tended to

[2] In 1937 paper twine represented only 3 percent of the value of all cordage manufactured.

evolve into separate hard- and soft-fiber divisions. Even in those establishments which process both hard and soft fibers, the two types of raw materials are handled in separate departments.

The soft fibers used in the industry include cotton (used largely as wrapping twine and in braided form for sash cord), true hemp (still used in marine fittings), jute, linen, sunn, and kenaf. Hard fibers include abaca (commonly called manila fiber) which is made into marine and other high-tensile-strength cordage, and sisal and henequen, used in the manufacture of binder twine. Other important hard fibers include mauritius, cantala, and istle.

Cotton-fiber mills constitute an important branch of the industry, accounting for about one-half of the total workers included in the study. For that reason, and also because of distinct differences in their wage levels, mills manufacturing cotton cordage have been treated as a separate division although, as pointed out above, cotton is properly considered a soft fiber.

Most of the establishments and by far the majority of the employees in the cotton-cordage division were found in Southern States. Only one plant making cordage of other soft fibers and two hard-fiber plants were included among those studied in the South.

Cordage and twine plants differ widely in size, varying in number of employees from fewer than 21 to more than 1,000. Of the 43 plants covered by the study, 18 with 16.5 percent of the total number of workers employed between 10 and 100 wage earners, 10 with 22.5 percent of the total employees had between 101 and 250, and 5 employing 15.3 percent of the total had between 251 and 500. The 10 largest establishments, those employing more than 500 wage earners, gave employment to nearly one-half (45.7 percent) of the total workers included in the study.

Although a small majority of the plants are in cities of more than 50,000 inhabitants, a majority of the workers are found in smaller places. Eight establishments with 22.5 percent of the total wage earners were found in communities of fewer than 10,000 inhabitants, 13 mills employing 32.5 percent of the workers were in districts of 10 to 50 thousand, 9 plants with 17.0 percent of the total were in areas of 50,000 to one-half million, and 13 establishments providing employment to 28.0 percent of the workers scheduled were in metropolitan areas of one-half million or more.

COMPOSITION OF THE LABOR FORCE

The cordage and twine industry is characterized by an unusually high proportion of semiskilled employees. Among cotton-fiber mills included in the Bureau's survey, skilled workers accounted for but 9.4 percent and unskilled employees for only 16.8 percent of the total working force. Considerably more than half of the employees

of other soft-fiber mills were semiskilled, only 11.7 percent and 21.5 percent, respectively, of the workers being in skilled and unskilled categories. In hard-fiber mills, skilled workers represented 12 percent and unskilled employees about 35 percent of the total.

The proportion of female workers in the total working force varies somewhat among the three divisions of the industry. Women constituted only 19.0 percent of the workers in hard-fiber plants studied, as against 35.9 percent in cotton-fiber plants and 43.9 percent of workers in other soft-fiber mills. Relatively few Negroes, representing not more than 5 percent of the total workers in any division, found employment in the industry. About three-fourths of the Negro employees were in southern mills.

Comparatively few (8.3 percent of the total) of the cordage and twine workers for whom data were secured were employed by establishments with effective union agreements. The union plants included four northern hard-fiber mills and one southern manufacturer of cotton cordage. In each case the union agreement was with the Textile Workers' Union of America, a C. I. O. affiliate.

METHODS OF WAGE PAYMENT

Three-fifths (60.1 percent) of all employees included in the survey were paid at straight hourly, weekly, or monthly rates. The rest of the workers were paid either piece rates or production bonuses. Time workers constituted 55.5 percent in the cotton-cordage division, 58.4 percent in other soft-fiber mills, and 70.3 percent in hard-fiber plants. Throughout all the divisions of the industry, straight-time rates were more common among male than among female employees.

Production-bonus plans were in effect for 16.0 percent of all employees in the industry. Most of the bonus workers were in cotton-cordage mills where 26.2 percent of the employees were covered by such a plan. Only 4.7 of the soft-fiber mill employees and 7.3 percent of the workers in hard-fiber mills were eligible for bonus earnings.

Scope and Method of Study

The study of earnings and hours in the cordage and twine industry was based on a representative sample embracing approximately one-third of the establishments in the industry. These establishments were carefully selected to obtain proper representation with respect to such factors as location, type of fiber, size of mill,[3] size of community, unionization, corporate affiliation, etc.

Following the usual practice of the Bureau, trained field representatives obtained the necessary information directly from company

[3] For practical purposes the survey was limited to mills employing 10 or more workers. These mills are believed to account for more than 95 percent of the employment in the industry.

records, through personal observation of plant operations, and by means of interviews with responsible officials. The data obtained included hours and earnings [4] of each employee for 1 week in August or September 1940. The sex, color, job title, and method of payment of each worker and certain information relating to plant policies and practices were also secured from each establishment. The field representatives prepared a description of the duties performed in each occupation encountered and requested plant officials to estimate the degree of skill essential to satisfactory performance of these duties. This information supplied the basis for the occupational groupings and skill classifications used in this report. Data were obtained for both factory and clerical employees, but the information for clerical employees has been excluded from all tabulations except tables 5, 9, and 13, which present averages by occupation.

Average Hourly Earnings in the Industry as a Whole

The hourly earnings of all employees in the cordage and twine industry averaged 46.8 cents in September 1940 (table 2). However, as the industry has three distinct divisions, a general average is of little significance. The heterogeneous character of the industry is reflected in the wide variation in wages of individual employees.

TABLE 2.—*Percentage Distribution of Cordage and Twine Employees by Average Hourly Earnings and Type of Product, September 1940*

Average hourly earnings	All mills	Cotton-fiber mills	Other soft-fiber mills	Hard-fiber mills
Under 32.5 cents	0.2	0.4	0.2	----
Exactly 32.5 cents	15.8	26.9	9.6	0.4
32.6 and under 35.0 cents	6.2	11.8	1.2	.1
35.0 and under 37.5 cents	9.0	12.9	4.4	6.1
37.5 and under 40.0 cents	7.1	10.9	5.6	1.4
40.0 and under 42.5 cents	8.8	10.9	7.8	5.6
42.5 and under 45.0 cents	6.7	7.3	6.9	5.4
45.0 and under 47.5 cents	5.8	4.3	7.9	6.6
47.5 and under 50.0 cents	6.0	4.4	9.2	6.0
50.0 and under 52.5 cents	8.3	3.6	10.5	15.1
52.5 and under 55.0 cents	4.6	1.9	8.2	6.3
55.0 and under 57.5 cents	4.8	1.3	6.0	10.1
57.5 and under 60.0 cents	2.2	.3	3.6	4.4
60.0 and under 62.5 cents	2.8	.8	4.4	5.2
62.5 and under 65.0 cents	2.4	.2	2.6	6.4
65.0 and under 67.5 cents	2.0	.4	2.1	5.0
67.5 and under 70.0 cents	1.0	.3	.7	2.7
70.0 and under 72.5 cents	1.5	.3	2.2	3.0
72.5 and under 75.0 cents	.7	.1	1.0	1.4
75.0 and under 77.5 cents	1.5	.5	3.1	2.2
77.5 and under 80.0 cents	.5	(1)	.2	1.4
80.0 and under 82.5 cents	.4	.1	.5	.9
82.5 and under 87.5 cents	.5	.1	.7	1.2
87.5 and under 92.5 cents	.4	.1	.5	.9
92.5 and under 97.5 cents	.2	----	.4	.6
97.5 cents and over	.6	.2	.5	1.6
Total	100.0	100.0	100.0	100.0
Total number of employees	5,299	2,621	1,291	1,387
Average hourly earnings	$0.468	$0.397	$0.506	$0.559

[1] Less than a tenth of 1 percent.

[4] Field representatives reported extra earnings resulting from penalty overtime rates separately from earnings at regular rates of pay. The wage data in this report reflect only earnings at regular wage rates. Had extra earnings been included, the industry average would have been increased three-tenths of a cent per hour.

Average hourly earnings ranged from less than 32.5 cents to over $1. It will be noted that although 15.8 percent of the employees received earnings averaging exactly 32.5 cents (the legal minimum in effect for the industry at the time of the study), no other wage interval embraced as much as 10 percent of the workers.

Cotton-Fiber Division

AVERAGE HOURLY EARNINGS

Employees in cotton-fiber cordage plants received earnings averaging 39.7 cents per hour (table 3). Although hourly earnings of individual workers extended over a wide range (from under 32.5 cents to more than 97.5 cents), the earnings of a large majority of employees were confined to quite narrow limits. More than half (51.6 percent) of the workers had earnings falling within the 5-cent range of 32.5 cents and under 37.5 cents. Almost nine-tenths (89.8 percent) of all workers in the cotton-cordage industry received hourly earnings averaging less than 50.0 cents.

TABLE 3.—*Percentage Distribution of Employees in Cotton-Fiber Cordage and Twine Mills by Average Hourly Earnings, Sex, and Skill, September 1940*

Average hourly earnings	All employees				Males				Females[2]
	Total	Skilled	Semi-skilled[1]	Unskilled	Total	Skilled	Semi-skilled	Unskilled	
Under 32.5 cents	0.4	.....	0.3	1.3	0.4	.....	0.1	1.3	0.4
Exactly 32.5 cents	26.9	0.8	27.0	41.7	26.5	0.8	27.2	41.7	27.0
32.6 and under 35.0 cents	11.8	1.6	12.9	12.2	11.2	1.6	13.2	12.2	12.7
35.0 and under 37.5 cents	12.9	9.4	11.8	20.7	11.5	9.4	8.7	20.7	15.3
37.5 and under 40.0 cents	10.9	8.1	12.0	7.3	7.6	8.1	7.6	7.3	16.8
40.0 and under 42.5 cents	10.9	8.1	12.1	6.0	10.3	8.1	12.4	6.0	12.0
42.5 and under 45.0 cents	7.3	3.2	8.7	2.8	5.0	3.2	6.2	2.8	11.4
45.0 and under 47.5 cents	4.3	9.8	4.3	1.3	6.1	9.8	7.1	1.3	1.2
47.5 and under 50.0 cents	4.4	11.0	3.5	4.7	6.3	11.0	5.8	4.7	1.0
50.0 and under 52.5 cents	3.6	9.0	3.4	1.0	4.5	9.0	4.7	1.0	2.0
52.5 and under 55.0 cents	1.9	5.3	1.9	.....	2.9	5.3	3.4	.....	.1
55.0 and under 57.5 cents	1.3	2.4	1.2	1.0	2.0	2.4	2.2	1.0	.....
57.5 and under 60.0 cents	.3	2.4	.2	.....	.5	2.4	.3	.....	.....
60.0 and under 62.5 cents	.8	6.5	.3	.....	1.3	6.5	.5	.....	.....
62.5 and under 65.0 cents	.2	2.0	.1	.....	.4	2.0	.1	.....	.....
65.0 and under 67.5 cents	.4	3.6	.1	.....	.6	3.6	.1	.....	.1
67.5 and under 70.0 cents	.3	3.2	.....	.....	.5	3.2	.....	.....	.....
70.0 and under 72.5 cents	.3	3.2	.....	.....	.5	3.2	.....	.....	.....
72.5 and under 75.0 cents	.1	.8	.....	.....	.1	.8	.....	.....	.....
75.0 and under 77.5 cents	.5	3.2	.2	.....	.7	3.2	.4	.....	.....
77.5 and under 80.0 cents	(3)	.4	.....	.....	.1	.4	.....	.....	.....
80.0 and under 82.5 cents	.1	1.2	.....	.....	.2	1.2	.....	.....	.....
82.5 and under 87.5 cents	.1	1.2	.....	.....	.2	1.2	.....	.....	.....
87.5 and under 92.5 cents	.1	1.2	.....	.....	.2	1.2	.....	.....	.....
92.5 and under 97.5 cents	.....	.....	.....	.....	.....	.....	.....	.....	.....
97.5 cents and over	.2	2.4	.....	.....	.4	2.4	.....	.....	.....
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total number of employees	2,621	247	1,988	386	1,679	247	1,046	386	942
Average hourly earnings	$0.397	$0.528	$0.385	$0.360	$0.410	$0.528	$0.396	$0.360	$0.372

[1] Includes 55 unskilled female employees.
[2] Includes 55 unskilled and 887 semiskilled employees.
[3] Less than a tenth of 1 percent.

VARIATIONS BY SEX AND SKILL

The hourly earnings of skilled male employees in the cotton-cordage division averaged 52.8 cents (table 3). This was substantially greater than the average attained by either the semiskilled males, the unskilled males, or the female workers, almost all of whom were semiskilled. Relatively little variation in earnings is in evidence among these latter groups.

The substantial difference in favor of the skilled male workers, and the absence of any considerable variation among the other groups of employees is confirmed by the distribution of earnings of individual wage earners. Almost half (48.0 percent) of the skilled males received earnings averaging 50.0 cents or more. In contrast, only 11.7 percent of the semiskilled males and roughly 2 percent of the females and unskilled males were averaging 50.0 cents or more. A somewhat greater variation appears at the lower end of the distribution. Only some 12 percent of the skilled males averaged less than 37.5 cents an hour. However, 49.2 percent of the semiskilled males, 55.4 percent of the woman workers, and fully 75.9 percent of the unskilled male employees were earning less than 37.5 cents. The number of workers at the 32.5-cent statutory minimum varied conspicuously from one skill-sex group to another, ranging from 41.7 percent of the unskilled males to only eight-tenths of 1 percent of the skilled male workers.

REGIONAL DIFFERENCES

Employees of northern cotton-cordage plants received hourly earnings averaging 8.3 cents more than the 38.6 cents averaged by workers in Southern States (table 4). An even larger difference is revealed by a comparison of earnings of northern and southern males, the former averaging 50.5 cents as against 39.5 cents for the southern workers. The earnings of northern and southern females, however, do not reveal so sharp a difference, the 36.7 cents received by southern women being only 3.4 cents less than the average hourly remuneration paid to females in northern mills. Pronounced differences in the earnings of the individual workers are also in evidence. More than one-fourth of the male workers in southern mills received exactly 32.5 cents, but only 4.7 percent of the northern men were paid at the minimum rate. Over half of the southern males received less than 37.5 cents, and more than nine-tenths of them less than 50.0 cents an hour. In contrast, only one-tenth of the northern males received less than 37.5 cents and but 51.1 percent earned less than 50.0 cents. Similar but less extreme differences affect the earnings of female workers.

TABLE 4.—*Percentage Distribution of Employees in Cotton-Fiber Cordage and Twine Mills, by Average Hourly Earnings, Sex, and Region, September 1940*

Average hourly earnings	All employees			Males			Females		
	United States	North	South	United States	North	South	United States	North	South
Under 32.5 cents	0.4	0.9	0.3	0.4	.....	0.4	0.4	2.5	0.1
Exactly 32.5 cents	26.9	10.1	29.2	26.5	4.7	29.9	27.0	20.0	28.2
32.6 and under 35.0 cents	11.8	.6	13.4	11.2	.5	12.9	12.7	.8	14.5
35.0 and under 37.5 cents	12.9	5.4	14.0	11.5	4.7	12.7	15.3	6.7	16.5
37.5 and under 40.0 cents	10.9	5.7	11.7	7.6	7.4	7.7	16.8	2.5	19.0
40.0 and under 42.5 cents	10.9	4.8	11.8	10.3	4.7	11.1	12.0	5.0	13.0
42.5 and under 45.0 cents	7.3	24.4	4.8	5.0	6.0	4.8	11.4	57.5	4.6
45.0 and under 47.5 cents	4.3	3.9	4.4	6.1	6.0	6.1	1.2	.....	1.3
47.5 and under 50.0 cents	4.4	11.8	3.3	6.3	17.1	4.7	1.0	2.5	.7
50.0 and under 52.5 cents	3.6	8.4	2.9	4.5	11.5	3.4	2.0	2.5	1.9
52.5 and under 55.0 cents	1.9	5.7	1.4	2.9	8.8	2.0	.1	.....	.1
55.0 and under 57.5 cents	1.3	7.2	.4	2.0	11.2	.6	.....	.....	.....
57.5 and under 60.0 cents	.3	.9	.3	.5	1.4	.4	.....	.....	.....
60.0 and under 62.5 cents	.8	3.3	.4	1.3	5.1	.7	.....	.....	.....
62.5 and under 65.0 cents	.2	1.2	.1	.4	1.9	.1	.....	.....	.....
65.0 and under 67.5 cents	.4	.9	.3	.6	1.4	.5	.1	.....	.1
67.5 and under 70.0 cents	.3	1.2	.2	.5	1.9	.3	.....	.....	.....
70.0 and under 72.5 cents	.3	1.8	.1	.5	2.8	.1	.....	.....	.....
72.5 and under 75.0 cents	.1	.....	.1	.1	.....	.1	.....	.....	.....
75.0 and under 77.5 cents	.5	.3	.5	.7	.5	.8	.....	.....	.....
77.5 and under 80.0 cents	(1)	.....	(1)	.1	.....	.1	.....	.....	.....
80.0 and under 82.5 cents	.1	.3	.1	.2	.5	.1	.....	.....	.....
82.5 and under 87.5 cents	.1	.6	(1)	.2	.9	.1	.....	.....	.....
87.5 and under 92.5 cents	.1	.3	.1	.2	.5	.1	.....	.....	.....
92.5 and under 97.5 cents	.....	.....	.....	.....	.....	.....	.....	.....	.....
97.5 cents and over	.2	.3	.2	.4	.5	.3	.....	.....	.....
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total number of employees	2,621	335	2,286	1,679	215	1,464	942	120	822
Average hourly earnings	$0.397	$0.469	$0.386	$0.410	$0.505	$0.395	$0.372	$0.401	$0.367

[1] Less than a tenth of 1 percent.

OCCUPATIONAL DIFFERENCES

Machinists received the highest average hourly earnings paid to any of the occupational groups in the cotton-cordage industry. As shown by table 5, these workers received 62.3 cents an hour. In contrast, the subforemen, also classified as skilled, were paid only 45.5 cents. Among semiskilled male workers, little variation in average earnings is in evidence; the highest earnings (44.0 cents) were received by braider tenders and the lowest (35.3 cents) by ballers and winders. Even less variation appears in the earnings of unskilled male employees, whose earnings ranged from 38.7 cents, received by miscellaneous unskilled workers, to 33.7 cents, paid to watchmen. The occupational data are not sufficiently numerous to justify the presentation of separate figures for North and South.

The average earnings of semiskilled females were also confined to narrow limits. The highest average was received by braider tenders, whose earnings were 38.1 cents, or only 3.1 cents more than the average (35.0 cents) paid to packers, who constituted the lowest-paid group. The unskilled females averaged 36.3 cents an hour.

TABLE 5.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings of Employees in Cotton-Fiber Mills, September 1940, by Sex, Skill, and Occupation*

Sex, skill, and occupation	Number of employees	Average hourly earnings	Average weekly hours	Average weekly earnings
Males				
Skilled employees:				
Adjusters and fixers (production machinery)	51	$0.460	39.9	$18.33
Card grinders	19	.457	39.1	17.88
Foremen and assistants, working	61	.620	42.9	26.60
Machinists	21	.623	40.2	25.03
Subforemen	43	.455	38.8	17.68
Miscellaneous skilled, indirect	52	.524	47.2	24.74
Semiskilled employees:				
Ballers and winders (packaging)	32	.353	37.6	13.27
Braider tenders	61	.440	38.5	16.94
Card tenders (soft fiber)	106	.381	37.4	14.25
Doffers	125	.365	36.4	13.28
Drawing-frame operators	43	.359	38.3	13.75
Former and layer operators	35	.416	35.9	14.90
Hanking-machine tenders	41	.434	38.0	16.50
Oilers (productive machines)	40	.386	37.6	14.50
Packers	41	.394	37.2	14.63
Picker-and-breaker tenders	43	.381	36.2	13.80
Polishers	42	.402	40.8	16.38
Reelers	39	.395	37.0	14.63
Roving-frame operators	109	.403	36.9	14.86
Twisters	138	.406	36.4	14.79
Miscellaneous semiskilled, direct	65	.394	38.1	15.02
Miscellaneous semiskilled, indirect	86	.423	40.0	16.95
Unskilled employees:				
Bale openers	20	.346	39.5	13.68
Cleaners, machinery	27	.358	35.5	12.74
Hand truckers	103	.353	37.6	13.26
Janitors	48	.348	36.1	12.57
Laborers, indirect	44	.353	34.8	12.29
Watchmen	33	.337	36.0	12.13
Miscellaneous unskilled, direct	85	.387	36.2	14.01
Miscellaneous unskilled, indirect	26	.373	36.4	13.57
Clerical employees	24	.488	42.1	20.56
Females				
Semiskilled employees:				
Ballers	38	.363	35.6	12.91
Braider tenders	68	.381	38.0	14.50
Packers	44	.350	35.1	12.27
Roving-frame operators	44	.374	37.1	13.88
Spinners	211	.379	35.0	13.26
Twisters	74	.363	35.9	13.03
Winders (packaging)	124	.363	32.0	11.62
Winders (yarn)	216	.380	33.7	12.81
Miscellaneous semiskilled, direct	68	.363	35.1	12.72
Unskilled employees:				
Miscellaneous unskilled, direct	55	.363	35.1	12.74
Clerical employees	53	.452	40.7	18.41

WEEKLY HOURS AND WEEKLY EARNINGS

Employees in the cotton-fiber division of the cordage industry worked an average of 36.8 hours a week in September 1940 (table 6). Male wage earners averaged 37.9 hours, compared with average weekly hours for female employees of 34.7. Substantial numbers of both male and female wage earners worked exactly 40.0 hours but 19.5 percent of the male as compared with only 7.2 percent of the female workers had workweeks of more than 40.0 hours.

TABLE 6.—*Percentage Distribution of Employees in Cotton-Fiber Cordage and Twine Mills, by Weekly Hours Actually Worked and by Sex, September 1940*

Weekly hours actually worked	All employees	Males	Females
Under 8 hours	0.2	0.1	0.4
8 and under 16 hours	1.4	1.1	1.8
16 and under 24 hours	3.1	2.2	4.6
24 and under 32 hours	10.2	7.5	15.0
32 and under 36 hours	17.1	13.3	23.9
36 and under 40 hours	11.9	11.5	12.7
Exactly 40 hours	41.0	44.8	34.4
Over 40 and under 44 hours	8.4	11.5	3.0
44 and under 48 hours	2.4	3.2	.8
48 and under 52 hours	3.4	3.4	3.4
52 and over	.9	1.4	
Total	100.0	100.0	100.0
Number of employees	2,621	1,679	942
Average weekly hours	36.8	37.9	34.7

The cotton-fiber cordage division paid its employees at rates averaging $14.59 a week in September 1940 (table 7). Earnings of individual employees varied from less than $3.00 to more than $36.00 weekly, but more than three-fifths of the workers had weekly earnings of between $12.00 and $18.00, and more than three-fourths between $9.00 and $18.00.

TABLE 7.—*Percentage Distribution of Employees in Cotton-Fiber Cordage and Twine Mills, by Weekly Earnings and Sex, September 1940*

Weekly earnings	All employees	Males	Females
Under $3.00	0.6	0.5	0.7
$3.00 and under $6.00	2.1	1.7	3.0
$6.00 and under $9.00	5.3	3.5	8.5
$9.00 and under $12.00	14.4	11.4	19.6
$12.00 and under $15.00	38.8	37.7	40.8
$15.00 and under $18.00	22.0	20.1	25.4
$18.00 and under $21.00	9.8	14.2	1.8
$21.00 and under $24.00	3.5	5.4	.1
$24.00 and under $27.00	1.4	2.1	
$27.00 and under $30.00	.8	1.3	
$30.00 and under $33.00	.6	.9	.1
$33.00 and under $36.00	.3	.5	
$36.00 and over	.4	.7	
Total	100.0	100.0	100.0
Number of employees	2,621	1,679	942
Average weekly earnings	$14.59	$15.54	$12.91

Male employees, whose weekly earnings were bolstered by higher hourly rates and a longer workweek, averaged $15.54 as compared with average earnings of $12.91 for females. Earnings in excess of $18.00 were confined almost entirely to the men.

Soft Fibers Other Than Cotton

AVERAGE HOURLY EARNINGS

Employees engaged in the production of cordage from soft fibers other than cotton averaged 50.6 cents an hour in September 1940. As shown by table 8, however, earnings of individual workers extended over a very wide range and showed little concentration at any one

level. Of the nearly 1,300 employees included in the study, 21.0 percent averaged less than 40 cents, 31.8 percent received between 40 and 50, 28.3 percent between 50 and 60, 9.8 percent between 60 and 70, and 9.1 percent 70 cents or more.

TABLE 8.—*Percentage Distribution of Employees in Other Soft-Fiber Cordage and Twine Mills, by Average Hourly Earnings, Sex, and Skill, September 1940*

Average hourly earnings	All employees				Males				Females [2]
	Total	Skilled	Semi-skilled [1]	Un-skilled	Total	Skilled	Semi-skilled	Un-skilled	
Under 32.5 cents	0.2	----	0.2	0.5	0.3	----	0.3	0.5	0.2
Exactly 32.5 cents	9.6	----	12.5	3.2	3.9	----	6.0	3.2	16.8
32.6 and under 35.0 cents	1.2	----	1.6	.5	.6	----	.9	.5	2.1
35.0 and under 37.5 cents	4.4	----	5.7	2.3	2.6	----	4.0	2.3	6.7
37.5 and under 40.0 cents	5.6	----	7.3	2.3	2.5	----	3.7	2.3	9.5
40.0 and under 42.5 cents	7.8	----	8.6	9.8	6.6	----	7.4	9.8	9.3
42.5 and under 45.0 cents	6.9	----	7.7	8.0	5.0	----	5.1	8.0	9.3
45.0 and under 47.5 cents	7.9	0.7	9.2	7.6	6.4	0.7	8.0	7.6	9.9
47.5 and under 50.0 cents	9.2	1.3	10.9	7.7	8.1	1.3	11.3	7.7	10.6
50.0 and under 52.5 cents	10.5	3.3	9.6	18.4	11.0	3.3	9.4	18.4	9.7
52.5 and under 55.0 cents	8.2	2.0	7.1	17.0	10.6	2.0	10.2	17.0	5.1
55.0 and under 57.5 cents	6.0	2.0	6.0	8.9	7.0	2.0	8.0	8.9	4.8
57.5 and under 60.0 cents	3.6	4.0	3.7	2.7	4.3	4.0	5.4	2.7	2.6
60.0 and under 62.5 cents	4.4	12.6	3.4	3.2	7.2	12.6	7.4	3.2	.9
62.5 and under 65.0 cents	2.6	3.3	2.2	4.1	3.7	3.3	3.7	4.1	1.2
65.0 and under 67.5 cents	2.1	7.9	1.4	.9	3.0	7.9	2.3	.9	.9
67.5 and under 70.0 cents	.7	1.3	.7	.5	1.1	1.3	1.4	.5	.2
70.0 and under 72.5 cents	2.2	14.6	.8	----	4.0	14.6	2.0	----	----
72.5 and under 75.0 cents	1.0	3.3	.8	.5	1.7	3.3	1.7	.5	.2
75.0 and under 77.5 cents	3.1	23.2	.3	.9	5.5	23.2	.9	.9	----
77.5 and under 80.0 cents	.2	1.3	.1	----	.4	1.3	.3	----	----
80.0 and under 82.5 cents	.5	4.0	.1	----	1.0	4.0	.3	----	----
82.5 and under 87.5 cents	.7	5.3	.1	----	1.2	5.3	.3	----	----
87.5 and under 92.5 cents	.5	3.3	----	.5	.8	3.3	----	.5	----
92.5 and under 97.5 cents	.4	3.3	----	----	.7	3.3	----	----	----
97.5 cents and over	.5	3.3	----	.5	.8	3.3	----	.5	----
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total number of employees	1,291	151	918	222	724	151	351	222	567
Average hourly earnings	$0.506	$0.717	$0.467	$0.505	$0.552	$0.717	$0.507	$0.505	$0.439

[1] Includes 56 unskilled female employees.
[2] Includes 56 unskilled and 511 semiskilled employees.

A partial explanation of the broad dispersion in earnings of employees in this division may be found in the sharply contrasted wage levels in effect for the various sex and skill groups. Average hourly earnings of the males were 55.2 cents as compared with average hourly earnings of 43.9 cents for woman workers. Skilled males averaged 71.7 cents, whereas the hourly earnings of semiskilled and unskilled males averaged only 50.7 cents and 50.5 cents, respectively. Despite these clear-cut differences in average earnings, it is apparent from further inspection of table 8 that even within each skill or sex group the average earnings of the individual workers were distributed over a considerable range. For example, earnings of the skilled males extended from less than 47.5 cents to more than 97.5 cents; those of females from under 32.5 cents to over 72.5 cents; and those of unskilled males from less than 32.5 cents to more than 97.5 cents. Moreover, in none of these distributions was there a notable concentration of employees at any wage level. Since all but two of the establishments were in the northern area, and none of them had a union

contract, it is evident that differences in region or in unionization were not the causes for this considerable variation. A distribution of plants by plant average hourly earnings seems to indicate that the wide spread in earnings resulted to a large degree from individual plant wage policies. Of the 12 establishments included in this division, 2 had average hourly earnings falling between 30 and 35 cents, 1 between 35 and 40, 3 between 40 and 45, 1 between 45 and 50, 4 between 50 and 55, and 1 between 55 and 60.

Wide differences in wages existed among the various occupational groups. Among skilled males, for example, average hourly earnings varied from 75.6 cents, paid to miscellaneous skilled employees, to 63.5 cents, earned by adjusters and fixers (table 9). Earnings of semiskilled males ranged from a high of 53.8 cents, received by finishing-machine operators, to 43.1 cents, the average for card tenders. The highest paid of the unskilled occupations were the bale openers, who averaged 58.4 cents.

TABLE 9.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings of Employees in Other Soft-Fiber Mills, September 1940, by Sex, Skill, and Occupation*

Sex, skill, and occupation	Number of employees	Average hourly earnings	Average weekly hours	Average weekly earnings
Males				
Skilled employees:				
Adjusters and fixers	22	$0.635	41.3	$26.22
Machinists	29	.743	42.1	31.31
Working supervisors	42	.684	38.6	26.39
Miscellaneous skilled, indirect	58	.756	43.0	32.51
Semiskilled employees:				
Card tenders	30	.431	36.7	15.79
Drawing- and roving-frame operators	24	.476	36.6	17.41
Finishing-machine operators	31	.538	38.2	20.53
Miscellaneous winders (packaging)	26	.487	38.5	18.77
Oilers (productive machines)	31	.536	37.6	20.13
Picker and breaker tenders	21	.495	37.2	18.42
Miscellaneous semiskilled, direct	115	.499	37.2	18.59
Miscellaneous semiskilled, indirect	73	.538	43.7	23.49
Unskilled employees:				
Bale openers	23	.584	35.0	20.44
Hand truckers	39	.486	36.5	17.72
Janitors	31	.455	39.1	17.81
Laborers, indirect	33	.543	39.4	21.43
Miscellaneous unskilled, direct	67	.508	39.3	19.92
Miscellaneous unskilled, indirect	29	.474	39.2	18.57
Clerical employees	36	.648	40.1	25.99
Females				
Semiskilled employees:				
Ballers and winders (packaging)	61	.464	37.4	17.35
Doffers	56	.380	31.7	12.07
Drawing-frame operators	85	.427	36.2	15.44
Roving-frame operators	29	.449	36.1	16.19
Spinners	72	.482	34.0	16.38
Testers and inspectors	27	.409	38.7	15.82
Twisters	34	.447	34.9	15.60
Winders (yarn)	51	.469	33.6	15.76
Miscellaneous semiskilled, direct	96	.448	37.1	16.62
Unskilled employees:				
Miscellaneous unskilled, direct	56	.394	32.6	12.84
Clerical employees	55	.508	39.7	20.16

Spinners were the highest-paid female workers, averaging 48.2 cents an hour. The lowest earnings paid to any occupational group among the female employees were received by the doffers, who averaged 38.0 cents an hour. There were too few women in the unskilled jobs to warrant the presentation of separate occupational averages.

WEEKLY HOURS AND WEEKLY EARNINGS

For employees in the "other soft-fiber" division of the cordage industry 37.4 hours constituted the average workweek in September 1940 (see table 10). A few employees worked as little as 8 hours and several as many as 52, but fully three-fourths of the wage earners worked between 32 and 44 hours. Nearly two-fifths (38.8 percent) were employed exactly 40 hours. Male employees worked 39.1 hours as contrasted with the average of 35.2 for female workers.

TABLE 10.—*Percentage Distribution of Employees in Other Soft-Fiber Cordage and Twine Mills, by Weekly Hours Actually Worked and by Sex, September 1940*

Weekly hours actually worked	All employees	Males	Females
Under 8 hours	0.2	0.3	
8 and under 16 hours	.6	.1	1.2
16 and under 24 hours	2.8	.6	5.6
24 and under 32 hours	6.6	3.7	10.2
32 and under 36 hours	21.8	20.3	23.8
36 and under 40 hours	7.1	6.4	8.1
Exactly 40 hours	38.8	34.2	44.4
Over 40 and under 44 hours	9.3	13.0	5.8
44 and under 48 hours	9.6	16.4	.9
48 and under 52 hours	1.5	2.8	
52 and over	1.2	2.2	
Total	100.0	100.0	100.0
Number of employees	1,291	724	567
Average weekly hours	37.4	39.1	35.2

TABLE 11.—*Percentage Distribution of Employees in Other Soft-Fiber Cordage and Twine Mills, by Weekly Earnings and Sex, September 1940*

Weekly earnings	All employees	Males	Females
Under $3.00	0.4	0.4	0.4
$3.00 and under $6.00	.8		1.8
$6.00 and under $9.00	2.8	.7	5.5
$9.00 and under $12.00	7.3	2.8	13.1
$12.00 and under $15.00	13.9	8.6	20.6
$15.00 and under $18.00	23.2	17.8	29.9
$18.00 and under $21.00	21.1	21.2	21.1
$21.00 and under $24.00	12.3	17.5	5.6
$24.00 and under $27.00	7.7	12.4	1.8
$27.00 and under $30.00	3.4	5.9	.2
$30.00 and under $33.00	2.5	4.4	
$33.00 and under $36.00	3.0	5.4	
$36.00 and over	1.6	2.9	
Total	100.0	100.0	100.0
Number of employees	1,291	724	567
Avereage weekly earnings	$18.92	$21.62	$15.47

The weekly earnings of employees in this division of the industry averaged $18.92 (table 11). As might be expected, in view of the wide dispersion in hourly earnings, weekly earnings of individual workers likewise extended over a wide range, varying from less than $3.00 to $36.00 and more. Male employees received earnings averaging $21.62; weekly earnings of female employees were $15.47. Almost half (48.5 percent) of the men, compared with but 7.6 percent of the females, received earnings of $21.00 or more.

Hard-Fiber Division

AVERAGE HOURLY EARNINGS

The average hourly wage paid to workers in the hard-fiber cordage industry was 55.9 cents in September 1940. As in the "other soft-fiber" branch, earnings of the individual workers exhibited extreme diversity, ranging from 32.5 cents to 97.5 cents and over. The data are further characterized by the absence of any sizable cluster of workers around a single wage class. As shown by table 12, the largest concentration of employees was found in the interval 50.0 to 52.5 cents, but this group constituted only 15.1 percent of the total. The wide dispersion in average hourly earnings may be attributed to the cumulative effect of union, sex, skill, and occupational differences. Northern union establishments in this division paid wages averaging 59.6 cents, and comparable nonunion mills 56.8 cents.

The effects of sex and skill on average earnings may be seen in the following comparisons. Male employees averaged 57.9 cents whereas females, most of whom were semiskilled, averaged only 47.2 cents. Skilled males received 75.4 cents, roughly 20 cents more than was paid to either semiskilled or unskilled males, who averaged 56.7 and 52.3 cents, respectively. The earnings of individual workers supply additional evidence as to the considerable effects of sex and skill on wages. Whereas more than half (50.6 percent) of the skilled males had earnings averaging 75 cents or more, only 5.6 percent of the semiskilled males, and but 1.8 percent of the unskilled males, received earnings equaling or exceeding that amount. None of the female workers averaged as much as 75 cents. Conversely, only 1.8 percent of the skilled males but 24.6 percent of the semiskilled males, and 32.2 percent of the unskilled males received average earnings of less than 50 cents an hour. Nearly two-thirds (63.2 percent) of the female workers failed to average 50 cents an hour.

TABLE 12.—*Percentage Distribution of Employees in Hard-Fiber Cordage and Twine Mills, by Average Hourly Earnings, Sex, and Skill, September 1940*

Average hourly earnings	All employees				Males				Females [2]
	Total	Skilled	Semi-skilled [1]	Unskilled	Total	Skilled	Semi-skilled	Unskilled	
Under 32.5 cents									
Exactly 32.5 cents	0.4			1.2	0.4			1.2	
32.6 and under 35.0 cents	.1		0.1		.1		0.2		
35.0 and under 37.5 cents	6.1	1.2	7.8	4.7	4.3	1.2	4.9	4.7	13.8
37.5 and under 40.0 cents	1.4		1.9	1.2	.8		.8	1.2	4.2
40.0 and under 42.5 cents	5.6		6.0	6.8	4.4		3.8	6.8	10.6
42.5 and under 45.0 cents	5.4		6.5	5.4	4.2		4.5	5.4	10.6
45.0 and under 47.5 cents	6.6		7.8	6.8	5.0		5.1	6.8	13.4
47.5 and under 50.0 cents	6.0	.6	7.1	6.1	4.9	.6	5.3	6.1	10.6
50.0 and under 52.5 cents	15.1	1.8	14.6	21.8	16.2	1.8	16.4	21.8	10.6
52.5 and under 55.0 cents	6.3	.6	5.0	10.8	6.7	.6	5.3	10.8	4.6
55.0 and under 57.5 cents	10.1	7.8	10.0	11.5	9.9	7.8	9.4	11.5	11.0
57.5 and under 60.0 cents	4.4	3.6	5.4	2.8	4.6	3.6	6.4	2.8	3.4
60.0 and under 62.5 cents	5.2	8.5	5.0	4.2	5.7	8.5	6.0	4.2	3.0
62.5 and under 65.0 cents	6.4	4.8	6.8	6.3	7.5	4.8	9.2	6.3	1.9
65.0 and under 67.5 cents	5.0	6.0	5.0	4.4	6.0	6.0	7.3	4.4	.4
67.5 and under 70.0 cents	2.7	3.6	2.8	2.1	2.9	3.6	3.4	2.1	1.5
70.0 and under 72.5 cents	3.0	9.1	2.9	.9	3.7	9.1	4.3	.9	
72.5 and under 75.0 cents	1.4	1.8	1.5	1.2	1.7	1.8	2.1	1.2	.4
75.0 and under 77.5 cents	2.2	11.5	.9	.9	2.7	11.5	1.3	.9	
77.5 and under 80.0 cents	1.4	7.2	.6	.7	1.8	7.2	.9	.7	
80.0 and under 82.5 cents	.9	5.4	.5		1.2	5.4	.8		
82.5 and under 87.5 cents	1.2	6.0	.6	.2	1.4	6.0	.9	.2	
87.5 and under 92.5 cents	.9	6.6	.3		1.2	6.6	.4		
92.5 and under 97.5 cents	.6	4.2	.1		.7	4.2	.2		
97.5 cents and over	1.6	9.7	.8		2.0	9.7	1.1		
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total number of employees	1,387	166	794	427	1,124	166	531	427	263
Average hourly earnings	$0.559	$0.754	$0.536	$0.523	$0.579	$0.754	$0.567	$0.523	$0.472

[1] Includes 62 unskilled female employees.
[2] Includes 62 unskilled and 201 semiskilled employees.

An additional factor contributing to the broad variations in hourly earnings was the difference in the wage levels of the various occupational groups (see table 13). Earnings of skilled males varied from 82.3 cents, averaged by machinists, to 61.9 cents, the average earnings of adjusters and fixers. The highest average among semiskilled males (61.6 cents) was paid to former and layer operators, while the lowest average (50.8 cents) was earned by reelers. Unskilled males also exhibited considerable variation in earnings. Average hourly earnings in this group ranged from 60.7 cents (the earnings of bale openers) to 48.8 cents (the average for janitors).

The earnings of female employees fell within relatively narrow confines. The highest-paid occupation was the group of spinners averaging 49.6 cents. Miscellaneous unskilled employees averaged only 5.3 cents less.

TABLE 13.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings of Employees in Hard-Fiber Mills, September 1940, by Sex, Skill, and Occupation*

Sex, skill, and occupation	Number of employees	Average hourly earnings	Average weekly hours	Average weekly earnings
Males				
Skilled employees:				
Adjusters and fixers (production machinery)	27	$0.619	39.4	$24.39
Foremen and assistants, working	31	.755	41.1	31.06
Machinists	33	.823	40.9	33.64
Miscellaneous skilled, indirect	75	.769	41.6	31.99
Semiskilled employees:				
Ballers and winders (packaging)	24	.599	38.3	22.97
Former and layer (combination) operators	47	.616	39.3	24.18
Former operators	64	.526	39.4	20.71
Layer operators	71	.545	39.4	21.48
Oilers (productive machines)	26	.546	40.2	21.94
Reelers	29	.508	40.4	20.55
Spinners	70	.587	39.4	23.13
Miscellaneous semiskilled, direct	124	.565	41.0	23.18
Miscellaneous semiskilled, indirect	76	.594	43.0	25.55
Unskilled employees:				
Bale openers	22	.607	37.3	22.65
Burlappers	25	.558	39.8	22.19
Finishing-machine tenders	33	.507	39.0	19.79
Hand truckers	43	.504	40.2	20.28
Janitors	23	.488	39.6	19.34
Laborers, indirect	55	.536	39.2	21.02
Preparation-machine tenders	143	.520	38.3	19.92
Miscellaneous unskilled, direct	42	.535	39.4	21.06
Miscellaneous unskilled, indirect	41	.497	41.2	20.46
Clerical employees	43	.732	40.2	29.44
Females				
Semiskilled employees:				
Spinners	119	.496	37.9	18.79
Twisters	34	.451	38.9	17.55
Miscellaneous semiskilled, direct	48	.463	38.5	17.82
Unskilled employees:				
Preparation-machine tenders	41	.447	39.0	17.46
Miscellaneous unskilled, direct	21	.443	38.4	17.02
Clerical employees	57	.553	39.8	22.04

WEEKLY HOURS AND WEEKLY EARNINGS

The hours actually worked by hard-fiber cordage mill employees in 1 week averaged 39.7 in September 1940 (table 14). Hours of individual employees varied from less than 8 to more than 52, but almost three-quarters of the workers had workweeks of exactly 40 hours. Male wage earners averaged 40 hours compared with 38.4 worked by female employees. It is noteworthy that only four-tenths of 1 percent of the women worked longer than 40 hours.

TABLE 14.—*Percentage Distribution of Employees in Hard-Fiber Cordage and Twine Mills, by Weekly Hours Actually Worked and By Sex, September 1940*

Weekly hours actually worked	All employees	Males	Females
Under 8 hours	0.1	----	0.4
8 and under 16 hours	.4	0.2	1.5
16 and under 24 hours	.7	.5	1.5
24 and under 32 hours	2.6	2.7	2.3
32 and under 36 hours	4.6	4.4	5.3
36 and under 40 hours	3.8	3.6	4.6
Exactly 40 hours	73.5	71.0	84.0
Over 40 and under 44 hours	6.3	7.7	.4
44 and under 48 hours	5.2	6.4	----
48 and under 52 hours	1.6	2.0	----
52 and over	1.2	1.5	----
Total	100.0	100.0	100.0
Number of employees	1,387	1,124	263
Average weekly hours	39.7	40.0	38.4

Weekly pay envelopes in the hard-fiber division contained an average of $22.19 at the time of the study (table 15). A majority of the employees (52.7 percent) had weekly earnings averaging more than $21.00. The earnings of male employees were considerably higher than those received by the woman workers, $23.15 as against $18.10. Earnings as high as $30.00 were confined to male employees, 12.3 percent of whom averaged that amount or more.

TABLE 15.—*Percentage Distribution of Employees in Hard-Fiber Cordage and Twine Mills, by Weekly Earnings and Sex, September 1940*

Weekly earnings	All employees	Males	Females
Under $3.00	0.1	----	0.4
$3.00 and under $6.00	.4	0.3	.8
$6.00 and under $9.00	.6	.4	1.5
$9.00 and under $12.00	.8	.7	1.1
$12.00 and under $15.00	7.4	5.1	17.1
$15.00 and under $18.00	13.1	10.4	24.7
$18.00 and under $21.00	24.9	23.4	31.6
$21.00 and under $24.00	19.9	20.6	17.1
$24.00 and under $27.00	15.4	18.0	4.2
$27.00 and under $30.00	7.4	8.8	1.5
$30.00 and under $33.00	5.1	6.3	----
$33.00 and under $36.00	1.9	2.4	----
$36.00 and over	3.0	3.6	----
Total	100.0	100.0	100.0
Number of employees	1,387	1,124	263
Average weekly earnings	$22.19	$23.15	$18.10

EARNINGS AND HOURS IN MISCELLANEOUS FABRICATED TEXTILE PRODUCTS, SEPTEMBER 1940 [1]

WORKERS engaged in the manufacture of cloth bags, sheets and pillowcases, window curtains, and other finished articles produced in textile mills earned an average of 41.2 cents an hour in September 1940, exclusive of extra payments for overtime work. This is indicated by a study of the industry recently completed by the Bureau of Labor Statistics.

At the time of the study the workers in the industry were subject, under the Fair Labor Standards Act, to a minimum wage of 32.5 cents. Only 2.9 percent of the workers studied earned less than this amount, but 31.0 percent earned exactly the minimum. Over half (53.2 percent) of the workers averaged less than 37.5 cents an hour and were presumably affected by the 37.5-cent minimum which became effective July 1, 1941. Nearly one-third (29.4 percent) received earnings averaging 37.5 but less than 50.0 cents, and 17.4 percent earned 50.0 cents or more.

Description of the Industry

The phrase "miscellaneous fabricated textile products," as used in the Bureau's wage study of September 1940, includes nearly a score of articles commonly manufactured in final form by textile mills. The products embraced by the title and covered by the present study may be grouped as follows: Bags; bandages and surgical gauze; bath mats and related articles; bedspreads; blankets; diapers; dishcloths, scrubbing cloths and washcloths; sheets and pillowcases; tablecloths, lunch cloths, and napkins; towels; and window curtains. Products processed from fabrics containing 25 percent or more in weight of wool or other animal fiber (other than silk) have not been included in the industry; these are considered as parts of the woolen and worsted industry.

The study of earnings and hours in establishments producing the above-mentioned items was undertaken at the request of the Administrator of the Wage and Hour Division and was designed to furnish quantitative data for use by an industry committee in determining a minimum wage for the textile industry. Therefore, the study was limited to products which were believed to be manufactured chiefly in textile establishments.

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[1] Prepared by Louis M. Solomon, assisted by Tolvo P. Kanninen, of the Bureau's Division of Wage and Hour Statistics. The survey was supervised by H. E. Riley.

The industry as a whole is of substantial size, in terms both of employees and of value of products. Although precise data are not available, it appears that in 1939 the industry included roughly 1,000 establishments, employed approximately 50,000 workers, and produced goods valued at about $320,000,000.

The industry is widely scattered geographically, but a large majority of the establishments are concentrated along the eastern seaboard. The establishments included in the Bureau's study have been chosen in such a way as to be representative of the entire industry;[2] and the regional distribution presented in table 1 reveals that the principal concentrations of mills and employees are found in Georgia, North Carolina, and New York.

TABLE 1.—*Regional Distribution of Mills and Employees Included in Survey of Miscellaneous Fabricated Textile Products, September 1940*

State	Number of mills	Employees	
		Number	Percent
United States	125	10,526	100.0
North	84	4,821	45.8
California	4	311	3.0
Connecticut	3	33	.3
Illinois	5	191	1.8
Massachusetts	17	742	7.0
New Jersey	6	353	3.4
New York	27	1,691	16.1
Pennsylvania	9	583	5.5
Other States [1]	13	917	8.7
South	41	5,705	54.2
Georgia	13	2,399	22.8
North Carolina	10	2,079	19.8
Texas	4	103	1.0
Virginia	3	182	1.7
Other States [2]	11	942	8.9

[1] Includes 1 mill in Delaware, 1 in Kansas, 1 in Ohio, 1 in Oregon, 1 in Wisconsin, 2 in Maine, 2 in Minnesota, 2 in Missouri, and 2 in Rhode Island.

[2] Includes 1 mill in Kentucky, 1 in Maryland, 1 in Oklahoma, 2 in Alabama, 2 in Louisiana, 2 in South Carolina, and 2 in Tennessee.

[2] The present report was based on information obtained from a sample of establishments which included approximately one-fifth of the mills and workers in the industry. These establishments were so selected as to provide adequate representation with respect to such factors as product, corporate affiliation, size, location, and unionization. For practical reasons the study was limited to establishments with 10 or more employees; these mills are estimated to have at least 95 percent of the workers in the industry.

The data were secured by representatives of the Bureau, who transcribed the information directly from company records or obtained it by means of interviews with plant officials or through personal observations. The information obtained included the hours and earnings for one pay-roll period of each wage earner in every establishment visited, as well as the sex, color, job designation, and method of pay of these workers. A majority of the reports covered pay-roll periods in August or September of 1940. In transcribing data on hours and earnings, the agents of the Bureau reported earnings at regular rates of pay separately from those resulting from the application of an extra rate for overtime. The tabulations in this report exclude extra compensation for overtime and reflect only earnings at regular wage rates. Had extra earnings been included, the industry average would have been increased four-tenths of 1 cent per hour.

Information relating to general plant policies on overtime pay, shifts, rest periods, etc., was also obtained from each establishment scheduled. As a basis for the occupational groupings and skill classifications used in this report, field representatives prepared a description of the duties involved in each occupation encountered and requested plant officials to estimate the degree of skill necessary for proper performance of these duties.

Information was obtained for both clerical and factory employees but the data for clerical have been excluded from all tabulations, except table 5, which presents averages by occupation.

Table 2 classifies the mills included in the study by type of product. Bedspread mills, with nearly 3,000 workers, constituted the largest division of the industry, while curtain mills and cotton-bag mills ranked second and third, respectively.

TABLE 2.—*Distribution of Mills and Employees Included in Survey of Miscellaneous Fabricated Textile Products, by Type of Product, September 1940*

Product	Number of mills	Employees	
		Number	Percent
All products	125	10,526	100.0
Bags—cotton	24	1,447	13.7
Bags—burlap and other fabric	11	566	5.4
Bandages and surgical gauze	7	137	1.3
Bedspreads	19	2,904	27.6
Blankets	4	270	2.6
Curtains	34	1,938	18.4
Sheets and pillowcases	9	1,225	11.6
Other products [1]	17	2,039	19.4

[1] Includes bath mats, diapers, dishcloths, lunch cloths, napkins, scrubbing cloths, tablecloths, towels, and washcloths.

As has been pointed out, a large proportion of the total output of the industry is produced in integrated establishments, i. e., in plants which both weave or finish the cloth and fabricate it into completed articles. The proportion of employees in integrated mills ranged from nearly 100 percent in the case of sheets, pillowcases, washcloths, tablecloths, and diapers, to less than 10 percent in the manufacture of curtains and bedspreads.[3]

The manufacture of the items included within the scope of the study was carried on in plants differing widely in size. Some establishments employed fewer than 20 workers, whereas two, which included workers in other than fabricating departments, employed 2,500 or more. The largest group of wage earners was found in mills employing between 101 and 250 workers.

Plants manufacturing miscellaneous fabricated textile products were located in communities varying in size from less than 2,500 inhabitants to a million or more. More than half of the southern establishments were situated in metropolitan areas of less than 10,000 inhabitants; in contrast, fully three-fourths of the northern mills were in districts of a half million or over. Of the 125 mills included in the study, 32, employing 42.4 percent of the workers scheduled, were in areas with less than 25,000 inhabitants; 8, with 11.1 percent, were in districts of between 25,000 and under 100,000; 16, with

[3] The proportions of employees in integrated establishments were as follows: Sheets and pillowcases, 98.7 percent; bath mats, diapers, dishcloths, lunch cloths, napkins, scrubbing cloths, tablecloths, towels, and washcloths, 94.9 percent; blankets, 94.8 percent; bandages and surgical gauze, 52.6 percent; bags, 10.6 percent; curtains, 7.9 percent; bedspreads, 6.9 percent. Employees of integrated mills constituted 43.4 percent of the total number included in the study.

11.0 percent, were in communities of between 100,000 and 500,000; and 69, with 35.5 percent of the employees, were in metropolitan districts of one-half million or more.

Composition of the Working Force

Outstanding characteristics of the labor force were a predominance of women and a high proportion of semiskilled employees. The proportion of females in the total working force varied by type of product. For example, three-fifths (60.6 percent) of the employees in bag plants as compared with nine-tenths (89.5 percent) of the curtain workers were women. In the industry as a whole, almost three-fourths of the workers were females.

The proportion of semiskilled workers, although large in every instance, varied sharply among the different product groups. Such employees constituted 83.5 percent of the bedspread workers, 82.4 percent of the workers in curtain mills, 78.1 percent in sheet and pillowcase plants, 49.5 percent in bag plants, and 65.9 percent of the workers in mills turning out other products. Except in bag plants, in which 12.6 percent were skilled employees, less than 5 percent of the workers in any division were in skilled occupations.

Less than 2 percent of the workers in the industry were Negroes, and almost all of these were employees of southern mills. Negroes were found principally in such unskilled occupations as janitors, truckers, and laborers.

Only 10.8 percent of the workers included in the study were employees of union establishments. All of the 13 mills which reported effective agreements regulating the hours and earnings of substantial proportions of their employees were in Northern States.

Slightly more than half of the workers in the industry were paid at straight hourly, weekly, or monthly rates. Many of the female workers, however (54.4 percent as against 16.8 percent among males), were paid on a piece basis. More than half of the employees in mills making bedspreads, sheets and pillowcases, and "other products" were on a piece-rate basis, but only about one-third of the bag-plant workers and one-fourth of the curtain-mill employees were paid by this method. Bonus systems applied to only 1.3 percent of the total.

Average Hourly Earnings

THE INDUSTRY AS A WHOLE

The average hourly earnings of all employees in the miscellaneous fabricated textile products industry were 41.2 cents in September 1940 (table 3). As might be expected, in view of the numerous product groups which comprise the industry, earnings of individual workers displayed considerable variation, ranging from less than 32.5 cents to

TABLE 3.—*Percentage Distribution of Employees in the Miscellaneous Fabricated Textile Products Industry by Average Hourly Earnings, Type of Product, and Region, September 1940*

Average hourly earnings	All products			Bags			Bedspreads		
	United States	North	South	United States	North	South	United States	North	South
Under 32.5 cents	2.9	3.5	2.4	3.2	4.7	0.2	4.5	0.4	5.0
Exactly 32.5 cents	31.0	15.5	44.1	12.4	.9	36.6	64.2	17.7	68.8
32.6 and under 35.0 cents	7.4	4.8	9.7	5.3	3.5	9.2	9.8	3.8	10.3
35.0 and under 37.5 cents	11.9	13.8	10.1	9.4	6.8	15.1	9.5	21.4	8.3
37.5 and under 40.0 cents	7.4	8.3	6.7	5.5	4.2	8.4	5.8	30.8	3.3
40.0 and under 42.5 cents	7.4	9.0	6.0	11.2	13.5	6.2	2.3	4.9	2.1
42.5 and under 45.0 cents	5.6	6.4	4.9	7.5	8.7	4.8	1.1	3.0	.9
45.0 and under 47.5 cents	4.9	6.0	3.9	6.2	7.4	3.4	.4	1.1	.3
47.5 and under 50.0 cents	4.1	5.2	3.2	4.8	5.8	2.7	.6	2.6	.4
50.0 and under 52.5 cents	4.2	5.7	3.0	5.8	7.3	2.5	.4	1.9	.3
52.5 and under 55.0 cents	2.6	3.5	1.9	4.0	5.2	1.6	.2	2.6	----
55.0 and under 57.5 cents	2.2	3.0	1.4	3.5	4.6	1.2	.3	2.3	.1
57.5 and under 60.0 cents	1.2	2.1	.6	2.2	2.9	.6	.3	2.6	(1)
60.0 and under 62.5 cents	1.2	1.9	.6	3.1	4.1	.9	.1	----	.1
62.5 and under 65.0 cents	.9	1.6	.2	1.8	2.3	.6	.1	1.1	(1)
65.0 and under 67.5 cents	1.0	1.8	.3	2.1	2.8	.6	.1	1.1	(1)
67.5 and under 70.0 cents	.6	1.1	.2	1.4	1.7	.9	.1	1.1	(1)
70.0 and under 72.5 cents	.6	1.1	.2	1.4	1.7	.9	.1	.8	.1
72.5 and under 77.5 cents	.7	1.4	.2	2.2	2.8	.8	.1	.8	----
77.5 and under 82.5 cents	.6	1.2	.2	2.0	2.6	.9	----	----	----
82.5 and under 87.5 cents	.5	1.0	.1	1.8	2.0	1.2	----	----	----
87.5 and under 92.5 cents	.3	.6	.1	.8	1.0	.3	----	----	----
92.5 and under 97.5 cents	.1	.3	----	.4	.6	----	----	----	----
97.5 and under 102.5 cents	.3	.5	(1)	.8	1.2	.2	----	----	----
102.5 cents and over	.4	.7	(1)	1.2	1.7	.2	----	----	----
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	10,526	4,821	5,705	2,013	1,372	641	2,904	266	2,638
Average hourly earnings	$0.412	$0.452	$0.376	$0.483	$0.519	$0.402	$0.342	$0.410	$0.336

Average hourly earnings	Sheets and pillowcases			Curtains	Other products [3]		
	United States	North	South	United States [2]	United States	North	South
Under 32.5 cents	0.8	1.5	0.2	1.8	2.7	9.1	0.2
Exactly 32.5 cents	3.7	----	7.0	33.0	19.1	7.8	23.5
32.6 and under 35.0 cents	6.9	3.8	9.8	6.3	7.7	4.6	8.9
35.0 and under 37.5 cents	19.3	22.0	16.9	17.0	8.7	8.0	8.9
37.5 and under 40.0 cents	11.9	11.2	12.5	6.9	9.0	8.9	9.1
40.0 and under 42.5 cents	8.1	8.2	8.0	6.4	10.4	8.9	11.0
42.5 and under 45.0 cents	8.0	7.9	8.1	5.0	8.6	6.2	9.5
45.0 and under 47.5 cents	7.1	8.4	5.9	4.9	8.1	6.4	8.7
47.5 and under 50.0 cents	7.9	9.1	6.9	3.5	6.4	6.7	6.3
50.0 and under 52.5 cents	8.7	8.2	9.1	4.7	4.9	4.4	5.0
52.5 and under 55.0 cents	6.0	6.5	5.5	1.5	3.6	3.3	3.7
55.0 and under 57.5 cents	3.6	3.6	3.6	1.8	2.9	3.4	2.7
57.5 and under 60.0 cents	1.9	1.5	2.2	1.4	1.2	2.4	.7
60.0 and under 62.5 cents	1.7	1.7	1.7	.7	1.1	1.8	.8
62.5 and under 65.0 cents	.4	.5	.3	.8	1.2	3.7	.3
65.0 and under 67.5 cents	1.5	2.1	.9	.6	1.1	3.3	.2
67.5 and under 70.0 cents	.6	1.0	.2	.6	.4	1.2	.1
70.0 and under 72.5 cents	.6	.9	.3	.5	.5	1.8	.1
72.5 and under 77.5 cents	.6	.7	.5	.8	.4	1.3	.1
77.5 and under 82.5 cents	.2	.3	.2	.3	.7	2.1	.1
82.5 and under 87.5 cents	.1	.2	----	.4	.4	1.6	----
87.5 and under 92.5 cents	.2	.5	----	.3	.3	1.0	.1
92.5 and under 97.5 cents	----	----	----	.2	.2	.6	----
97.5 and under 102.5 cents	.1	----	.2	.2	.2	.9	----
102.5 cents and over	.1	.2	----	.4	.2	.6	----
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	1,225	585	640	1,938	2,446	676	1,770
Average hourly earnings	$0.443	$0.456	$0.432	$0.401	$0.428	$0.475	$0.410

[1] Less than a tenth of 1 percent.
[2] Includes 1 southern mill.
[3] Includes bandages and surgical gauze, bathmats and related articles, blankets, diapers, dishcloths, scrubbing cloths and washcloths, tablecloths, lunch cloths and napkins, and towels.

more than $1 per hour. Almost one-third (31.0 percent) of the wage earners, however, received wage payments averaging exactly 32.5 cents, the legal minimum (at the time of the study) under the Fair Labor Standards Act.[4] Another sizable group of workers averaged 32.6 to 37.5 cents. Altogether, 53.2 percent of the employees were paid at rates averaging less than 37.5 cents, and 82.6 percent at less than 50.0 cents an hour.

As is apparent from table 3, the highest average earnings in the industry were received by employees of bag plants. These establishments, a number of which are unionized, paid wages averaging 48.3 cents, whereas bedspread mills, the lowest paying group, remunerated their employees at rates averaging only 34.2 cents. In general, the industry divisions paying the lowest wages are those with the largest proportions of woman workers.

REGIONAL DIFFERENCES

Northern workers in the miscellaneous fabricated textile products industry had average earnings of 45.2 cents an hour, as compared with 37.6 cents for southern employees. Moreover, the differences in earnings favoring the northern wage earners appeared in every product group. Northern bag employees received earnings averaging 51.9 cents, whereas southern bag workers averaged only 40.2 cents. Wage earners in northern bedspread plants averaged 41.0 cents, but only 33.6 cents in southern plants.

Fewer than one-fourth (23.8 percent) of the northern as compared with more than one-half (56.2 percent) of the southern employees had average earnings of less than 35.0 cents. On the other hand, a considerable number (13.2 percent) of the northern wage earners received wages averaging 60.0 cents or over; in contrast, only 2.1 percent of the southern workers had average hourly earnings as high as these.

SEX AND SKILL DIFFERENCES

Inspection of table 4 reveals clear-cut variations in the average earnings of male and female workers, as well as sharp distinctions among workers in the various skill classes. Male workers received 8.0 cents an hour more than the 39.0-cent average attained by female wage earners. The average hourly earnings of skilled employees were 63.3 cents, contrasting with earnings of 40.4 cents for semiskilled and 37.7 cents for unskilled workers. It will be observed that sex and skill differences are maintained throughout each of the product groups.

[4] Effective July 1, 1941, the minimum wage for this industry was raised to 37.5 cents per hour by order of the Administrator of the Wage and Hour Division. As is apparent from the distributions presented in table 3, this order affected the earnings of a substantial proportion of the workers.

TABLE 4.—*Average Hourly Earnings and Number of Employees in the Miscellaneous Fabricated Textile Products Industry, September 1940, by Region, Type of Product, Skill, and Sex*

Region and type of product	All employees			Skilled employees			Semiskilled employees			Unskilled employees		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
	Average hourly earnings											
United States												
All products	$0.412	$0.470	$0.390	$0.633	$0.658	$0.473	$0.404	$0.456	$0.393	$0.377	$0.382	$0.374
Bags	.483	.571	.422	.756	.763	(1)	.467	.551	.435	.408	.423	.398
Bedspreads	.342	.354	.339	.420	.428	.399	.340	.345	.339	.331	.335	.327
Curtains	.401	.505	.387	.717	.864	(1)	.402	.478	.394	.338	.350	.336
Sheets and pillowcases	.443	.478	.430	.623	.634	(1)	.446	.493	.435	.389	.395	.382
Other products	.428	.443	.422	.552	.557	(1)	.441	.463	.434	.382	.371	.388
North												
All products	.452	.578	.413	.747	.782	.520	.442	.551	.421	.399	.452	.377
Bags	.519	.637	.444	.790	.799	(1)	.496	.607	.457	.441	.484	.419
Bedspreads	.410	.475	.395	(1)	(1)	(1)	.413	.493	.401	.377	(1)	.364
Curtains [2]	.401	.505	.387	.717	.864	(1)	.402	.478	.394	.338	.350	.336
Sheets and pillowcases	.456	.521	.432	.652	(1)	(1)	.456	.536	.440	.410	.440	.382
Other products	.475	.566	.443	.675	(1)	(1)	.493	.584	.467	.390	.455	.361
South												
All products	.376	.393	.369	.511	.525	.424	.372	.387	.369	.358	.344	.369
Bags	.402	.445	.365	.660	.663	(1)	.386	.419	.372	.353	.350	.356
Bedspreads	.336	.344	.333	.413	.418	.401	.333	.332	.333	.325	.330	.318
Sheets and pillowcases	.432	.440	.429	(1)	(1)	(1)	.437	.460	.432	.364	.354	.382
Other products	.410	.404	.413	.506	.506	(1)	.419	.417	.419	.380	.350	.398
	Number of employees											
United States												
All products	10,526	2,650	7,876	563	486	77	7,587	1,279	6,308	2,376	885	1,491
Bags	2,013	793	1,220	254	246	8	996	255	741	763	292	471
Bedspreads	2,904	618	2,286	112	80	32	2,425	350	2,075	367	188	179
Curtains	1,938	204	1,734	47	26	21	1,596	142	1,454	295	36	259
Sheets and pillowcases	1,225	330	895	50	44	6	957	167	790	218	119	99
Other products	2,446	705	1,741	100	90	10	1,613	365	1,248	733	250	483
North												
All products	4,821	1,084	3,737	296	256	40	3,430	513	2,917	1,095	315	780
Bags	1,372	514	858	187	180	7	716	175	541	469	159	310
Bedspreads	266	48	218	9	8	1	209	26	183	48	14	34
Curtains [2]	1,938	204	1,734	47	26	21	1,596	142	1,454	295	36	259
Sheets and pillowcases	585	154	431	26	23	3	439	73	366	120	58	62
Other products	676	165	511	27	19	8	486	98	388	163	48	115
South												
All products	5,705	1,566	4,139	267	230	37	4,157	766	3,391	1,281	570	711
Bags	641	279	362	67	66	1	280	80	200	294	133	161
Bedspreads	2,638	570	2,068	103	72	31	2,216	324	1,892	319	174	145
Sheets and pillowcases	640	176	464	24	21	3	518	94	424	98	61	37
Other products	1,770	540	1,230	73	71	2	1,127	267	860	570	202	368

[1] Number of employees not sufficient to justify computation of an average.
[2] Includes 1 southern mill.

OCCUPATIONAL DIFFERENCES

The highest average hourly earnings in the miscellaneous fabricated textile products industry were paid to a small, but highly skilled, group of engravers. The earnings of these workers (80.9 cents) were 33.1 cents more than the average of 47.8 cents earned by machine fixers (table 5). Chenille operators, who constituted the largest semiskilled occupation for males, had the lowest earnings in this skill

classification—33.2 cents; highest paid among the semiskilled males were the assistant foremen, who averaged 59.1 cents. The earnings in specific unskilled male occupations ranged from 33.0 cents, the average for design stampers, to 39.8 cents, which was earned on the average by shipping and receiving laborers.

TABLE 5.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings of Employees in Miscellaneous Fabricated Textile Products Industry, September 1940, by Sex, Skill, and Occupation*

Sex, skill, and occupation	Number of employees	Average hourly earnings	Average weekly hours	Average weekly earnings
Males				
Skilled employees:				
Carpenters	33	$0.546	42.0	$22.89
Engravers, metal and rubber	22	.809	42.4	34.27
Foremen	72	.761	42.5	32.37
Machine fixers	103	.478	46.1	21.99
Machinists	38	.758	40.3	30.56
Printing pressmen	100	.749	41.3	30.95
Miscellaneous skilled, direct	49	.633	40.0	25.29
Miscellaneous skilled, indirect	69	.684	42.6	29.14
Semiskilled employees:				
Assistant foremen	38	.591	41.1	24.25
Baling press operators	45	.555	41.1	22.81
Chenille operators	205	.332	36.1	11.99
Cloth cutters, electric power knife	81	.583	40.3	23.51
Cloth cutters, hand	81	.438	40.2	17.59
Firemen, power plant	23	.530	46.9	24.85
Hand wrappers	25	.428	40.0	17.06
Inspectors	51	.386	39.7	15.31
Machine cutters, cloth	36	.608	40.7	24.70
Order fillers	41	.425	41.9	17.83
Power sewing-machine operators	31	.354	38.2	13.51
Printing-press feeders and helpers	52	.494	41.9	20.69
Rollers and end sewers	33	.488	39.0	19.06
Shippers and receivers	79	.555	43.4	24.06
Shipping packers	113	.378	41.2	15.59
Stock clerks	30	.417	42.5	17.74
Stock men	27	.535	42.2	22.54
Tearers, cloth	54	.494	38.3	18.91
Truck drivers	18	.468	41.6	19.50
Miscellaneous semiskilled, direct	111	.423	40.7	17.20
Miscellaneous semiskilled, indirect	105	.483	41.5	20.04
Unskilled employees:				
Design stampers (bedspreads)	89	.330	42.4	14.01
Floor helpers	48	.351	39.8	13.96
Hand truckers	191	.383	38.6	14.76
Janitors	80	.374	40.4	15.13
Laborers, shipping and receiving	135	.398	41.1	16.37
Laundry men	26	.343	44.8	15.39
Watchmen	59	.390	42.9	16.73
Miscellaneous unskilled, direct	174	.418	39.9	16.67
Miscellaneous unskilled, indirect	83	.376	40.4	15.19
Clerical employees	155	.503	40.5	20.40
Females				
Skilled employees:				
Miscellaneous skilled, direct	77	.473	42.3	20.01
Semiskilled employees:				
Assistant foreladies	30	.367	42.1	15.45
Chenille operators	1,605	.333	38.0	12.67
Cloth cutters, electric power knife	20	.457	35.9	16.43
Cloth cutters, hand	167	.404	36.5	14.75
Embroidery-machine operators	47	.407	38.0	15.45
Folders, hand	506	.404	37.7	15.20
Hand ironers	57	.402	38.0	15.28
Hand wrappers	303	.412	38.4	15.82
Inspectors	418	.479	39.0	14.77
Labelers and stampers	63	.418	35.6	14.89
Mangle pressers	82	.361	40.4	14.60
Menders, hand sewers	30	.430	37.0	15.90
Power sewing-machine operators	2,706	.426	37.9	16.13
Printing-press feeders and helpers	55	.403	41.1	16.56
Shipping packers	39	.356	42.0	14.93
Sorters, seconds	41	.391	38.4	14.98
Wrapping-machine operators	39	.460	32.1	14.79
Miscellaneous semiskilled	100	.393	40.3	15.82

TABLE 5.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings of Employees in Miscellaneous Fabricated Textile Products Industry, September 1940, by Sex, Skill, and Occupation*—Continued

Sex, skill, and occupation	Number of employees	Average hourly earnings	Average weekly hours	Average weekly earnings
Females—Continued				
Unskilled employees:				
Clippers	188	$0.380	35.4	$13.46
Floor helpers	271	.333	39.7	13.25
Janitresses	18	.352	35.3	12.43
Learners	35	.268	37.5	10.03
Offbearers and catchers, machine	24	.392	36.4	14.25
Stock stackers, assorters and counters	77	.378	34.4	13.03
Table workers—pullers and straighteners	161	.410	37.1	15.18
Ticketers, shipments	37	.374	41.4	15.47
Trimmers	311	.364	38.2	13.88
Turners, hand	118	.424	36.7	15.54
Turners, machine	75	.460	39.3	18.08
Work distributors	65	.354	36.7	12.99
Miscellaneous unskilled	111	.373	38.3	14.29
Clerical employees	303	.463	41.6	19.28

There were too few females in any skilled occupation to permit the presentation of separate averages. The hourly earnings of the large group of semiskilled females varied from a low of 33.3 cents, paid to chenille operators, to 47.9, cents, the average earnings of inspectors. Power sewing-machine operators, who comprised more than one-fourth of all employees scheduled, had average hourly earnings of 42.6 cents. The lowest earnings among the unskilled females (26.8 cents) were paid to learners. Machine turners received the highest earnings in the group (46.0 cents).

Average Weekly Hours and Weekly Earnings

Employees of miscellaneous fabricated textile products mills worked an average of 38.7 hours in September 1940 (table 6). Although the hours actually worked in 1 week by individual wage earners varied from less than 8 to more than 56, more than three-fourths (75.5 percent) of the employees had a workweek of between 32 and 44 hours.

TABLE 6.—*Percentage Distribution of Employees in Miscellaneous Fabricated Textile Products Industry by Actual Hours Worked in 1 Week and by Region, September 1940*

Weekly hours	United States	North	South
Under 8.0 hours	0.5	0.3	0.7
8.0 and under 16.0 hours	1.9	1.2	2.5
16.0 and under 24.0 hours	3.1	2.8	3.3
24.0 and under 32.0 hours	6.2	4.8	7.3
32.0 and under 40.0 hours	17.1	15.8	18.2
Exactly 40.0 hours	33.0	39.8	27.5
40.1 and under 44.0 hours	25.4	19.0	30.7
44.0 and under 48.0 hours	7.7	11.1	4.8
48.0 and under 56.0 hours	4.4	4.6	4.3
56.0 hours and over	.7	.6	.7
Total	100.0	100.0	100.0
Number of employees	10,526	4,821	5,705
Average weekly hours	38.7	39.4	38.1

Northern employees worked more hours than those in southern mills (39.4 as against 38.1). Employees working exactly 40 hours constituted a substantial proportion of the total.

Weekly pay envelopes of employees in the industry contained an average of $15.93 (table 7). The earnings of individual employees, reflecting the wide dispersion in hourly earnings, ranged from less than $4 to $36 a week. A majority of the workers, however, received weekly earnings of less than $16, and nearly three-fourths (74.6 percent) earned less than $18 a week.

TABLE 7.—*Percentage Distribution of Employees in Miscellaneous Fabricated Textile Products Industry, by Average Weekly Earnings and by Region, September 1940*

Weekly earnings	United States	North	South
Under $4.00	1.4	0.9	1.9
$4.00 and under $6.00	1.5	1.0	2.1
$6.00 and under $8.00	1.8	1.3	2.3
$8.00 and under $10.00	3.4	1.9	4.6
$10.00 and under $12.00	6.4	4.1	8.4
$12.00 and under $14.00	27.5	17.5	35.9
$14.00 and under $16.00	19.5	21.3	17.8
$16.00 and under $18.00	13.1	15.2	11.3
$18.00 and under $20.00	8.3	10.0	6.9
$20.00 and under $22.00	5.9	7.7	4.4
$22.00 and under $24.00	3.3	5.0	1.8
$24.00 and under $26.00	2.4	4.0	1.0
$26.00 and under $28.00	1.5	2.7	.5
$28.00 and under $30.00	.9	1.6	.3
$30.00 and under $32.00	.8	1.5	.2
$32.00 and under $34.00	.6	1.0	.2
$34.00 and under $36.00	.4	.7	.2
$36.00 and over	1.3	2.6	.2
Total	100.0	100.0	100.0
Number of employees	10,526	4,821	5,705
Average weekly earnings	$15.93	$17.79	$14.35

Average weekly earnings of northern employees were $17.79 as compared with the average weekly wage of $14.35 received by workers in southern mills. Workers in bag mills received the highest weekly earnings ($18.94) while the lowest weekly compensation ($13.38) went to employees of bedspread plants.

COLLECTION OF WAGE CLAIMS BY CALIFORNIA STATE LABOR OFFICE, 1940

IN THE fiscal year ended June 30, 1940, claims on account of nonpayment of wages, filed with the California Division of Labor Statistics and Law Enforcement, totaled 23,387 as compared with 23,465 in 1939 and 37,230 in 1931.[1] In 1940, the number of claims settled by recovery was 14,140, the records for 1939 and 1931, respectively, being 13,589 and 19,554. Unpaid wages recovered totaled $519,623 in 1940, $511,820 in 1939, and $1,157,413 in 1931.

[1] California. Department of Industrial Relations. Division of Labor Statistics and Law Enforcement Labor in California: Biennial statistical report to the Legislature, 1939-1940. San Francisco, 1941.

TABLE 1.—*Collection of Unpaid Wages by California Labor Office, 1931–40*

Year ended June 30—	Claims filed	Claims settled by recovery	Unpaid wages recovered
1931	37,230	19,554	$1,157,413
1932	35,190	17,447	867,996
1933	33,326	16,205	717,541
1934	28,850	16,133	646,220
1935	24,809	14,153	578,259
1936	22,768	13,921	526,856
1937	22,115	14,454	505,715
1938	23,759	14,372	512,670
1939	23,465	13,589	511,820
1940	23,387	14,140	519,623

As of June 30, 1940, the amount of the total wages recovered by the California Division of Labor Statistics and Law Enforcement since the first wage-collection law of the State was enacted in 1911, was $14,604,000. The number of workers sharing in these recovered wages was over 313,000.

Of the 46,852 wage claimants in the biennium ending June 30, 1940, 4,350 were laborers, 3,972 farm workers, 3,213 carpenters, 2,301 domestic workers, and 2,043 painters.

TABLE 2.—*Occupations of Wage Claimants in California, 1939 and 1940*

Occupation	Number of claims	Occupation	Number of claims
All occupations	46,852	Hotel help, not elsewhere classified	107
		Janitor or janitress	311
Actor or actress	104	Kitchen help, not elsewhere classified	195
Artisan, not elsewhere classified	247	Laborer	4,350
Baker	171	Laundry worker	222
Bartender	444	Lumberman	158
Beauty operator	207	Machine operator	242
Bookkeeper	327	Machinist	637
Bricklayer	102	Maid	333
Butcher	120	Manager	135
Cabinetmaker	101	Mechanic	261
Cannery worker	197	Messenger	204
Carpenter	3,213	Milker	288
Cashier	107	Millwright	104
Cement worker	279	Miner	624
Chauffeur	108	Musician	711
Cleaner and dyer	98	Nurse	2,021
Clerk	892	Oil worker	738
Cook	1,466	Painter	2,043
Dishwasher	418	Paperhanger	114
Domestic	2,301	Plasterer	321
Draftsman	101	Plumber	202
Dressmaker	172	Printer	130
Driver	1,174	Restaurant help, not elsewhere classified	232
Electrician	223	Salesperson	1,964
Engineer	113	Service-station attendant	354
Entertainer	703	Solicitor	455
Factory worker	594	Stenographer	701
Farm laborer	3,972	Tailor or tailoress	187
Foreman	447	Teacher	107
Fruit packer	239	Teamster	255
Fruit picker	996	Theatrical help, not elsewhere classified	172
Garage laborer	174	Waiter or waitress	1,762
Gardener	619	Watchman	265
Helper	198	Woodchopper	242
Hod carrier	129	Unclassified	4,949

During the fiscal year 1940 the Division of Labor Statistics and Law Enforcement filed 446 civil suits to recover unpaid wages, as compared to 296 in the previous 12 months. The amounts involved in 1940 and 1939 were, respectively, $164,501 and $119,043.

Statistics of civil suits by years, 1931 to 1940, are given in table 3.

TABLE 3.—*Wage-Claim Civil Suits Handled by California Labor Office, 1931–40*

Year ended June 30—	Civil suits			Criminal prosecutions started
	Number filed	Number of claimants	Amount involved	
1931	283	1,848	$437,828	1,629
1932	411	1,654	237,921	1,524
1933	520	2,522	278,717	1,375
1934	496	1,941	216,715	1,194
1935	414	1,676	147,832	897
1936	248	1,745	135,585	941
1937	236	1,034	107,905	944
1938	292	1,482	144,274	917
1939	296	1,649	119,043	1,067
1940	446	1,759	164,501	1,315

WAGES AND HOURS IN BRITISH COLUMBIA, 1940

IN 1940 the average weekly wage for adult male industrial employees in British Columbia was $28.11, which represented an increase of $1.31, as compared with the weekly wage reported for 1939 and was the highest recorded since 1930.[1]

The average wage of adult males in the week of greatest employment ordinarily means a full week's wage. In 1940 these weekly wages ranged from $17.70 in the cigar and tobacco industry to $34.34 in printing and publishing and $43.44 in jewelry manufacturing.

Many industries were employing substantial numbers of men in 1940 at less than $19 per week, food products reporting 31.69 percent of 11,358 adult males in that wage group; the metal trades, 21.65 percent of 5,312 men; and the lumber industries, 3.33 percent of 29,083 men. Only 1.36 percent of the 7,807 men engaged in metal mining, however, were reported as receiving such low wages.

The average weekly working hours for industrial employees of various ages (male and female), in 1940, were 46.91, as compared with 47.80 in the preceding year and 48.25 in 1929.[2]

Of the 103,636 employees reported by employers, 88.93 percent worked 48 hours or less per week in 1940, 5.13 percent between 48 and 54 hours per week, and 5.94 percent over 54 hours per week. In 5 industries—coast shipping, food-products manufacture, metal mining, oil refining, and smelting—the average weekly hours in 1929 were over 51, reaching almost 54 in metal mining. In 1940, in only 3 industries were the average weekly hours 50 or more—metal mining, for which 50.20 hours were reported, coast shipping, and logging railways, for which the average weekly hours were, respectively, 50.38 and 52.65.

[1] British Columbia. Department of Labor. Annual Report, Year Ended December 31, 1940. Victoria, 1941.

[2] Figures for 1929 are from British Columbia, Department of Labor. Annual Report for Year Ended December 31, 1932. Victoria, 1933.

The table following gives average weekly wages of adult males for the week of greatest employment, and average weekly hours of work for all industrial employees specified (male and female), by industries, in British Columbia, for 1929, 1939, and 1940.

Average Weekly Wages and Hours of Work in British Columbia, 1929, 1939, and 1940[1]

Industry group	Average full week's wage (adult males only)			Average weekly hours of male and female employees of various ages		
	1929 [2]	1939	1940	1929 [2]	1939	1940
Breweries	$27.70	$27.98	$28.23	46.77	45.41	44.95
Builders' materials	28.04	23.23	24.15	46.96	45.07	45.31
Cigars and tobacco	26.58	19.75	17.70	44.40	40.40	41.50
Coal mining	30.18	29.39	28.04	48.03	47.92	48.03
Coastal shipping	32.84	29.35	30.34	51.05	49.42	50.38
Contracting	30.57	26.12	27.52	45.16	43.82	44.01
Explosives and chemicals	24.61	25.75	31.67	46.04	42.57	45.81
Food products	26.56	23.23	23.59	51.01	47.59	46.78
Garment making	28.68	24.25	25.22	44.87	43.69	43.38
Housefurnishings	26.74	22.53	23.59	45.53	44.12	44.76
Jewelry manufacturing	36.61	39.23	43.44	44.24	40.75	43.87
Laundries, cleaning and dyeing	23.16	23.19	24.00	46.62	44.66	44.35
Leather and fur-goods manufacturing	29.03	21.19	21.72	46.70	44.27	44.93
Lumber industries	26.54	27.14	28.83			
Logging				47.31	48.47	48.37
Logging railways				48.61	50.36	52.65
Lumber dealers				47.63	45.80	45.17
Planing mills				49.14	48.71	49.17
Sawmills				49.12	47.98	48.17
Shingle mills				47.86	47.57	47.35
Metal mining	35.24	30.86	31.77	53.96	50.19	50.20
Metal trades	29.50	25.38	26.18	45.87	44.93	45.13
Oil refining	30.50	28.97	29.17	51.61	47.69	48.17
Paint manufacturing	25.58	22.69	23.15	45.00	44.10	43.95
Printing and publishing	40.81	34.34	34.34	45.44	42.64	42.24
Pulp and paper manufacturing	27.87	26.54	29.84	48.35	47.96	47.78
Shipbuilding	30.25	28.55	31.74	44.15	44.08	43.68
Smelting	33.09	25.57	32.75	52.72	47.89	49.28
Street railways, gas, water, power, etc	30.70	28.63	28.57	44.61	45.11	45.40
Wood manufacturing (not elsewhere specified)	25.49	23.22	24.88	47.03	46.39	47.27

[1] In the article on wages and hours in British Columbia in the November 1939 Monthly Labor Review, the table heading erroneously gave the average weekly hours as for adult males only. The figures on hours were for employees (male and female) of various ages.

[2] 1929 figures are from British Columbia, Department of Labor, Annual Report for the Year Ended December 31, 1932, Victoria, 1933.

EARNINGS IN CANADIAN MANUFACTURING INDUSTRIES, 1938

AVERAGE annual earnings of males in 40 leading manufacturing industries in Canada in 1938 were $1,068, ranging from $692 in fish curing and packing to $1,516 in petroleum products. Weekly hours of labor of these male wage earners in the same group of manufacturing industries averaged 47.3, as shown in table 1.[1]

[1] Canada. Dominion Bureau of Statistics. The Manufacturing Industries of Canada, 1938. Summary report. Ottawa, 1941.

TABLE 1.—*Average Earnings and Hours of Male Wage Earners in 40 Leading Manufacturing Industries in Canada, 1938*

Industry [1]	Average earnings			Hours worked per week
	Annual	Weekly	Hourly	
All manufacturing industries	$1,055	$21.49	$0.454	47.3
40 leading industries				
Sawmills	807	15.46	.284	54.5
Pulp and paper	1,203	25.07	.550	45.6
Railway rolling-stock	1,310	27.31	.678	40.3
Bread and other bakery products	989	19.03	.361	52.7
Automobiles	1,268	30.89	.835	37.0
Primary iron and steel	1,288	28.10	.562	50.0
Nonferrous metal smelting and refining	1,445	28.12	.622	45.2
Electrical apparatus and supplies	1,053	20.90	.476	43.9
Cotton yarn and cloth	839	15.78	.334	47.3
Butter and cheese	(2)	(2)	(2)	(2)
Castings and forgings	1,038	22.39	.495	45.2
Machinery	1,100	22.56	.497	45.4
Printing and publishing	1,437	27.29	.630	43.3
Boots and shoes, leather	767	16.85	.359	46.9
Slaughtering and meat packing	1,223	23.44	.482	48.6
Furniture	816	17.93	.385	46.6
Rubber goods (including footwear)	1,054	22.46	.490	45.8
Printing and bookbinding	1,155	23.20	.521	44.5
Hosiery and knit goods	926	19.38	.394	49.2
Planing mills, sash and door factories	817	16.95	.345	49.2
Clothing, men's factory (including furnishings)	985	19.70	.439	44.9
Automobile supplies	1,106	25.60	.566	45.2
Sheet-metal products	1,031	21.73	.472	46.0
Agricultural implements	1,089	23.17	.490	47.3
Silk and artificial silk	951	20.12	.399	50.4
Clothing, women's factory	972	21.08	.506	41.7
Hardware and tools	966	23.04	.497	46.4
Biscuits, confectionery, cocoa, etc	902	18.05	.370	48.8
Heating and cooking apparatus	979	24.54	.509	48.2
Fruit and vegetable preparations	711	15.20	.300	50.7
Breweries	1,244	24.25	.494	49.1
Petroleum products	1,516	28.84	.723	39.9
Flour and feed mills	966	19.08	.373	51.1
Fish curing and packing	692	15.33	.307	50.0
Brass and copper products	1,056	21.10	.483	43.7
Leather tanneries	916	19.87	.410	48.5
Wire and wire goods	1,060	22.12	.457	48.4
Aerated and mineral waters	993	19.03	.375	50.8
Shipbuilding and repairs	1,239	25.48	.525	48.5
Woolen cloth	846	17.94	.364	49.3
Average, 40 industries	1,068	21.71	.459	47.3

[1] Industries ranked according to number of male wage earners employed.
[2] Figures not available.

The average earnings of females in the 40 leading manufacturing industries for the year under review were $592 and the average weekly hours 44.7, as shown in table 2. The highest earnings—$784—were reported for the fur-goods industry, and the lowest—$284—for fish curing and packing.

In table 3 the relation is shown between salaries and wages in the manufacturing industries and the total net value of production, 1929 to 1938. In 1933 the percentage of wages in value added was 32.3, but by 1938 the percentage had risen to 34.9, the highest recorded for the decade covered.

TABLE 2.—*Average Earnings and Hours of Female Wage Earners in 40 Leading Manufacturing Industries in Canada, 1938*

Industry	Earnings			Hours worked per week
	Annual	Weekly	Hourly	
All manufacturing industries	$594	$12.10	$0.271	44.6
40 leading industries				
Clothing, women's factory	608	13.18	.302	43.7
Clothing, men's factory (including furnishings)	599	11.98	.270	44.4
Hosiery and knit goods	586	12.26	.266	46.1
Cotton yarn and cloth	619	11.64	.275	42.4
Boots and shoes, leather	509	11.18	.238	47.0
Biscuits, confectionery, cocoa, etc.	559	11.19	.245	45.6
Fruit and vegetable preparations	469	10.01	.226	44.2
Tobacco, cigars, and cigarettes	580	11.76	.275	42.8
Electrical apparatus and supplies	709	14.07	.331	42.5
Rubber goods (including footwear)	638	13.58	.298	45.6
Silk and artificial silk	576	12.20	.272	44.8
Bread and other bakery products	625	12.02	.263	45.7
Printing and bookbinding	651	13.09	.296	44.2
Boxes and bags, paper	613	12.84	.282	45.5
Woolen cloth	596	12.64	.277	45.6
Hats and caps	676	14.00	.344	40.7
Medicinal and pharmaceutical preparations	657	12.75	.299	42.6
Printing and publishing	634	12.04	.292	41.3
Woolen yarn	559	12.13	.260	46.7
Clothing contractors, men's and women's	506	12.86	.313	41.1
Fur goods	784	15.83	.379	41.8
Corsets	532	10.86	.242	44.9
Miscellaneous paper products	638	13.78	.318	43.3
Slaughtering and meat packing	762	14.61	.332	44.0
Tobacco processing and packing	595	13.60	.294	46.3
Fish curing and packing	284	6.28	.130	48.3
Gloves and mittens, leather	499	11.42	.251	45.5
Sheet-metal products	723	15.23	.349	43.6
Miscellaneous chemical products	540	10.17	.232	43.9
Miscellaneous leather goods	593	12.62	.282	44.7
Automobile supplies	678	15.69	.373	42.1
Hardware and tools	550	13.06	.312	41.9
Cotton goods, not elsewhere specified	598	11.99	.273	44.0
Jewelry and silverware	638	13.27	.292	45.4
Lithographing	651	12.64	.281	45.0
Coffee, tea, and spices	613	12.14	.270	45.0
Butter and cheese	(1)	(1)	(1)	(1)
Foods, miscellaneous	621	12.59	.299	42.1
Pulp and paper	546	11.38	.266	42.8
Bags, cotton and jute	625	12.84	.281	45.7
Average, 40 industries	592	11.99	.268	44.7

[1] Figures not available.

TABLE 3.—*Salaries and Wages Paid, as Percent of Total Net Values of Manufacturing Production, 1929–38*

Year	Value added by processes of manufacture [1]	Salaries as percent of value added	Wages as percent of value added	Total salaries and wages as percent of value added
1929	$1,755,386,937	10.0	34.3	44.3
1930	1,522,737,125	11.2	34.6	45.8
1931	1,252,017,248	13.8	33.2	47.0
1932	955,960,724	15.8	33.7	49.5
1933	919,671,181	15.1	32.3	47.4
1934	1,087,301,742	13.7	32.7	46.4
1935	1,153,485,104	13.9	34.6	48.5
1936	1,289,592,672	13.4	34.0	47.4
1937	1,508,924,867	13.0	34.8	47.8
1938	1,428,286,778	14.5	34.9	49.4

[1] Equivalent to "net value of products." In accordance with a resolution passed by the Conference of British Commonwealth Statisticians, 1935, the net value of production is now computed by subtracting the cost of fuel and electricity as well as the cost of materials from the gross value of the products.

SUPPLEMENTARY ALLOWANCES FOR FRENCH WAGE EARNERS

WAGES in France were stabilized at the level in effect on September 1, 1939, by decrees of November 10, 1939,[1] and May 31, 1940. Only in exceptional cases have wages thus stabilized been modified since that time by decision of the Secretary of State for Labor under the procedure provided for in the decrees. In view of the great increase in the cost of living, supplementary wage allowances were provided for workers in industrial and commercial enterprises and for civil servants by a decree dated May 23, 1941.[2]

According to a statement accompanying the decree and addressed to the Marshall of France by the interested ministers and secretaries of State, the measures taken by the Government prior to the present law, which increased family allowances and established a minimum wage, increased the resources of workers with families and helped them to meet the difficulties of existence, but the rising cost of living has rendered it necessary to provide assistance for the majority of the workers. It was also stated that, although the increases provided by the law are not considered a satisfactory solution of the problem of insufficient wages, they should increase the buying power of these workers and thus stimulate production.

The law covers workers in industrial and commercial enterprises, the liberal professions, ministerial bureaus, professional syndicates, and societies and associations of all kinds, whose salaries or wages do not exceed the limit fixed for inclusion in the social-insurance system. It also includes the personnel of the public administrations and services, both State and local, but does not include artisans nor those groups enumerated in the law of October 30, 1935, relative to the application to agricultural occupations of the legislation on family allowances.

The supplementary wage allowances were made retroactive to June 1, 1941, and were based on the wages in effect on September 1, 1939, or readjusted since that time. They are payable by the employer. The allowances are considered as wages but at the same time the receipt of the allowance may not have the effect through the increase in wages of removing an employee from the social-insurance system.

[1] See Monthly Labor Review, March 1940 (p. 606).

[2] Data are from report from H. Freeman Mathews, First Secretary of United States Embassy, Vichy, France; and Journal Officiel, June 12, 1941.

The supplementary allowance is fixed according to locality as follows:

	Francs per—	
	Hour	*Month*
Paris, Department of Seine, and region of Paris	1. 15	200
Cities of over 100,000 population, and industrial environs	1. 00	175
Cities of over 20,000 population, and industrial environs	. 90	156
Cities of over 5,000 population, and industrial environs	. 75	130
Other localities	. 50	86

These supplementary allowances are reduced by one-half for workers under 17 years of age and by one-quarter for those under 20 years of age. The application of this regulation may not have the effect of increasing the remuneration of young workers more than 20 percent.

WAGES IN THE LUMBER INDUSTRY IN EAST PRUSSIA, GERMANY

THE Labor Trustee of East Prussia on October 22, 1940, fixed wage rates in the lumber and related industries in East Prussia.[1] These rates ranged, according to locality, skill, and age, from 21 pfennigs per hour for unskilled workers under 16 years of age to 82 pfennigs for special workers over 22 years of age, in first-class cities.

The legal deductions from wages (principally as various taxes and social-insurance contributions) amount, on an average, to 13 percent of wages. Other deductions, such as dues to the Labor Front and its various branches, contributions to the so-called "winter help," donations to provide gift packages for the soldiers on the fighting front, etc., to reduce the worker's income still further by a substantial percentage.

Daily Wage rates in Lumber Industry in East Prussia, Germany, Effective October 1940

Skill and age group	Rate (in pfennigs *) per hour in—			Skill and age group	Rate (in pfennigs *) per hour in—		
	Localities of first class	Localities with population of over 10,000	Other localities		Localities of first class	Localities with population of over 10,000	Other localities
Special workers, aged—				Semiskilled workers, aged—Continued.			
Over 22 years	82	75	68	18 to 20 years	46	44	41
20 to 22 years	71	68	61	16 to 18 years	33	32	30
Under 20 years	60	57	53	Under 16 years	26	25	24
Skilled workers, aged—				Unskilled workers, aged—			
Over 22 years	75	70	62	Over 22 years	62	56	51
20 to 22 years	64	60	56	20 to 22 years	51	48	43
18 to 20 years	53	49	46	18 to 20 years	42	39	36
Under 18 years	38	35	33	16 to 18 years	30	28	26
Semiskilled workers, aged—				Under 16 years	24	22	21
Over 22 years	68	63	56				
20 to 22 years	56	54	50				

* Average exchange rate (nominal only) of Reichsmark (100 pfennigs) in October 1940=40 cents.

[1] Germany, Reichsarbeitsministerium, Reichsarbeitsblatt (Berlin), December 20, 1940 (Part IV, p. 1518).

WAGES IN SWITZERLAND IN 1940

AVERAGE daily and hourly earnings in Switzerland were higher in 1940 than in 1939. This increase was in general more marked for hourly than for daily earnings. The annual report [1] of wages in certain industries published by the Federal Bureau of Industry, Arts and Trades, and Labor is based on data obtained from workers injured in industrial accidents as to the actual wages and supplementary allowances received by them at the time of the accident. The reports for 1940 covered 63,424 workers, of whom 51,310 reported hourly earnings and 12,114 daily earnings. The increases in hourly earnings in 1940 as compared with 1939 were 11.8 percent for young persons aged 18 and over, 3.4 percent for foremen, master workmen, and unskilled workers, 2.3 percent for skilled and semiskilled workers, and 2.7 percent for women. Daily earnings of young persons had increased 8.1 percent; foremen and master workmen, 2.3 percent; skilled and semiskilled workers, 3.4 percent; unskilled workers, 0.8 percent; and women 2.1 percent. These average earnings are influenced by the fact that there was a considerable change during the year in the composition of the personnel in the different industries as regards age and occupational qualifications, resulting from the calling up of men for military service as well as from measures taken to adapt industry to a new production. As compared with 1913, average daily wages of men had increased by 104 to 118 percent; for women the increase was 97 percent, and for young persons, 54 percent. The increase is somewhat more pronounced for hourly earnings by reason of the reduction in working hours since 1913. Hourly earnings for men had increased by 118 to 131 percent, for women 149 percent, and for young persons 71 percent.

The purchasing power of wages based on the cost-of-living index was lower in 1940 than in 1939. The increase in average earnings, except in the case of young persons, ranged from 0.8 to 3.4 percent, but the cost-of-living index rose from 138.0 to 150.8, or an increase of 9.3 percent. The average daily real wages of adult workers were reduced by 5.4 to 7.7 percent and the average hourly wages by 5.4 to 6.3 percent. Among young persons there was a reduction of 1.1 percent in the purchasing power of the average daily wage and an increase in real hourly wages of 2.3 percent. Based on 1913, the index of daily real wages had increased between 31 and 44 percent for the different classes of workers, with the exception of young workers, while for hourly wages the increase ranged from 45 to 65 percent. The largest wage increases in 1940 were in the four principal cities—Zurich, Berne, Basel, and Geneva.

The following table shows the average daily and hourly earnings reported for the different classes of workers in the various industries in 1940.

[1] Switzerland, Département Fédéral de L'Économie Publique, La Vie Économique (Berne, May 1941).

Average Daily and Hourly Earnings of Workers in Specified Industries in Switzerland in 1940

[Average exchange rate of franc in 1940=22.7 cents]

Industry	Average daily earnings (in francs) of—			Average hourly earnings (in francs) of—		
	Skilled and semi-skilled workers	Unskilled workers	Women	Skilled and semi-skilled workers	Unskilled workers	Women
Average, all occupations	12.62	9.77	6.34	1.41	1.10	0.74
Metals and machines	11.73	9.96		1.44	1.12	.74
Building	13.32	11.41		1.47	1.12	
Wood	9.43	7.95		1.30	.98	.66
Textiles	11.41	9.20	6.28	1.11	.98	.73
Watches			6.15	1.44	1.11	.84
Stone and earth	11.79	8.56		1.28	1.09	
Shoes				1.22	.87	.75
Paper				1.32	1.04	.66
Graphic arts	16.04	9.97	6.29	1.91	1.12	.72
Chemicals	13.47	11.12		1.50	1.25	.77
Food, drink, and tobacco	14.25	11.89	5.89	1.43	1.22	.70
Conveyances	11.07	10.01			1.21	
Commercial establishments	13.14	10.76	7.80	1.32	1.17	.72
Electric light and power	15.31			1.55	1.13	
Gas and water	16.52	14.98		1.72	1.45	
Mining and quarrying	11.18			1.25	1.02	
Forestry	8.96	7.82		1.01	.95	

Building Operations

NEW DWELLING UNITS IN NONFARM AREAS, FIRST HALF OF 1941

Summary

CONSTRUCTION was started on approximately 319,000 new dwelling units in nonfarm areas during the first half of 1941—the largest half-year total since 1929—according to estimates prepared by the Bureau of Labor Statistics. This was an increase of 31 percent over the corresponding period of 1940 and resulted from a 20-percent rise in privately financed dwellings and a 151-percent gain in publicly financed projects. Primarily responsible for this upward movement was the increase of 38 percent in 1-family houses, while 2-family and apartment units gained 10 and 5 percent, respectively.

Publicly financed projects for which contracts were awarded during the current period will accommodate 53,671 families, approximately 17 percent of the nonfarm total. This includes 39,982 dwelling units in projects designated as being for defense purposes, bringing the total number of defense units under construction contract or completed to 73,767. The remaining 13,689 publicly financed units during the first half of 1941 were in nondefense United States Housing Authority projects.

The permit valuation of the nonfarm dwelling units on which construction was started during the first half of 1941 is estimated at approximately $1,112,000,000, an increase of 34 percent over the same period of 1940. Privately financed dwellings accounted for $943,000,000 of the total, publicly financed defense projects for $125,000,000, and nondefense USHA projects for $44,000,000.

Scope of Report

The "nonfarm area" of the United States consists of all urban and rural nonfarm places. The term "urban" applies to all incorporated places of 2,500 population or over, and also to a small group of towns especially classified as urban. Incorporated places smaller than 2,500 population, as well as unincorporated areas excluding farms, are described as "rural nonfarm." The classifications used here and also the groupings by size of city are based upon the 1940 census.

The estimates of new dwelling units presented are derived from a large sample of building-permit reports. Since building permits are usually issued when construction work is about to start, these estimates represent the future dwelling-unit capacity of buildings upon which construction was started in the period specified.

Building-permit data have been collected by the Bureau of Labor Statistics since 1920. At first only the larger cities submitted reports. The coverage of this sample has been steadily extended, however, until it now includes more than 2,300 cities of 1,000 population or over. In addition to this sample of cities a small number of counties has, since 1939, been submitting reports of building permits issued in their unincorporated areas. An attempt is being made to add to the reporting sample some incorporated places as small as 500 population and also a larger number of counties.

New Dwellings, First Half of 1941

Buildings in nonfarm areas on which construction was started during the first half of 1941 were designed to accommodate approximately 319,000 families. This total for the half-year period represents more new dwelling units than were provided during each of the calendar years 1930 to 1937. As compared with the corresponding period of 1940, the current total shows an increase of 31 percent. Even if the remainder of 1941 shows a much smaller percentage gain over the second half of 1940, the 1941 year total will probably exceed the 1940 total by more than 100,000 units.

Gains in the current period were not evenly distributed by type of unit. One-family dwellings, with 72,000 more new units, increased 38 percent over the number during the same period of 1940. Smaller increases of 10 and 5 percent were shown by 2-family and multifamily units, respectively. Approximately 82 percent of the first half of 1941 nonfarm total were 1-family units, 6 percent were 2-family, and 12 percent were multifamily units.

The smallest-sized cities and the rural nonfarm area made the largest percentage gains during the first half of 1941 as compared with the same period last year. Cities of all size groups showed gains, the smallest, 18 percent, being in cities of over 500,000 population.

Approximately 33 percent of the current total of new nonfarm dwelling units were in cities of over 100,000 population, 38 percent in smaller urban places, and 29 percent in rural nonfarm areas. Combination-type units, however, showed a heavier concentration in the larger cities. During the current period, 47 percent of the 2-family units and 73 percent of the apartments were in cities of over 100,000 population. The number of new dwelling units during the first half year of 1941 and of 1940 are presented, by type of dwelling, in table 1.

TABLE 1.—*New Dwelling Units in Nonfarm Areas, First 6 Months of 1940 and 1941, by Population Group and Type of Dwelling*

Area or population group (1940 census)	All types		1-family		2-family [1]		Multifamily [2]	
	First half of—		First half of—		First half of—		First half of—	
	1941	1940	1941	1940	1941	1940	1941	1940
All nonfarm areas	318,545	242,749	261,735	189,562	17,874	16,230	38,936	36,957
Percent of change, 1940 to 1941	+31.2		+38.1		+10.1		+5.4	
Urban (cities)	227,336	182,009	175,552	133,095	15,246	13,583	36,538	35,331
500,000 population and over	55,587	46,943	29,844	24,034	4,219	2,941	21,524	19,968
100,000 to 500,000 population	48,952	39,718	37,759	27,951	4,202	4,396	6,991	7,371
50,000 to 100,000 population	22,995	18,711	18,035	14,528	2,355	2,077	2,605	2,106
25,000 to 50,000 population	27,260	20,845	23,764	17,108	1,471	1,424	2,025	2,313
10,000 to 25,000 population	34,260	26,017	30,984	22,698	1,692	1,375	1,584	1,944
5,000 to 10,000 population	21,565	17,899	19,904	15,886	793	810	868	1,203
2,500 to 5,000 population	16,717	11,876	15,262	10,890	514	560	941	426
Rural nonfarm areas	91,209	60,740	86,183	56,467	2,628	2,647	2,398	1,626

[1] Includes 1- and 2-family dwellings with stores.
[2] Includes multifamily dwellings with stores.

Except for the Mountain States, where the level remained approximately the same, the smallest rate of increase over last year, 7 percent, was shown in the West South Central States. The New England States, with a total for the first half of 1941 nearly double the comparable figure for 1940, had the largest percentage gain. Most important half-year gains in terms of number of units were in the South Atlantic, East North Central, and Pacific States. These sections also led in total number of new dwelling units provided.

There was a strong seasonal rise from 129,000 new units in the first quarter of 1941 to 190,000 in the second quarter. As might be expected because of climatic conditions, the seasonal increases in the New England, Middle Atlantic, East North Central, and West North

TABLE 2.—*New Dwelling Units in Nonfarm Areas, Second Quarter of 1940 and First and Second Quarters of 1941, by Geographic Division and Type of Dwelling*

Geographic division	All types			1-family			2-family [1]			Multifamily [2]		
	Second quarter 1941	First quarter 1941	Second quarter 1940	Second quarter 1941	First quarter 1941	Second quarter 1940	Second quarter 1941	First quarter 1941	Second quarter 1940	Second quarter 1941	First quarter 1941	Second quarter 1940
All divisions	189,673	128,872	143,427	158,245	103,490	115,790	9,799	8,075	9,877	21,629	17,307	17,760
New England	10,997	6,787	6,034	7,883	5,363	5,298	711	436	284	2,403	988	452
Middle Atlantic	30,413	18,218	21,191	23,042	10,156	12,598	1,788	1,052	1,001	5,583	7,010	7,592
East North Central	37,458	19,959	28,003	33,772	17,747	25,183	1,381	1,155	2,015	2,305	1,057	805
West North Central	12,284	5,710	11,074	10,922	4,629	10,228	415	452	378	947	629	468
South Atlantic	33,387	28,945	25,200	26,344	23,453	18,892	1,731	1,789	2,045	5,312	3,703	4,263
East South Central	9,788	6,429	8,387	8,594	5,456	6,362	1,030	837	1,303	164	136	722
West South Central	14,515	11,801	11,636	13,086	10,371	10,031	1,044	915	1,335	385	515	270
Mountain	5,795	4,048	6,002	5,141	3,637	5,207	253	125	221	401	286	574
Pacific	35,036	26,975	25,900	29,461	22,678	21,991	1,446	1,314	1,295	4,129	2,983	2,614

[1] Includes 1- and 2-family dwellings with stores.
[2] Includes multifamily dwellings with stores.

Central States were sharper than in other areas. Estimates for each geographic division for the first and second quarters of 1941 and the second quarter of 1940 are shown in table 2 by type of unit.

New Housing, by Source of Funds

Projects financed with public funds during the first half of 1941 were designed for 53,671 families, 17 percent of the nonfarm total. This was 2½ times the number of publicly financed units during the comparable period of 1940 and slightly exceeded the 52,117 total for the second half of last year. During the first half of 1940 all of the publicly financed units were in regular USHA projects; during the last half, defense projects helped to swell the public total.

The various Federal agencies engaged in defense housing construction awarded contracts during the first half of 1941 for projects to accommodate 39,982 families. The total of new, publicly financed defense units in continental United States at the end of June 1941 stood at 63,767.[1] This did not include 1,573 units in completed Boston and Baltimore projects built under the original United States Housing Authority program but recently purchased from the local authorities and converted to defense purposes. Additional defense housing is being provided in trailers, dormitories, and portable units, none of which are included in totals given here.

Most active among the agencies concerned with defense housing during the first half of 1941 was the Public Buildings Administration, which initiated projects for 16,152 families. The USHA, with projects for 13,069 families, had charge of the next largest number of defense units during this period. These two agencies are subordinate to the Federal Works Administrator, from whose authority, under the Lanham Act, they derived most of their funds for defense housing. However, the office of the Federal Works Administrator itself took direct charge of projects planned to contain 6,167 units. The remaining defense units were scattered among other agencies, the Defense Homes Corporation with 2,763 units under contract being the most significant.

The magnitude of this defense program should not obscure the fact that slum clearance and publicly financed housing for low-income families has continued, although on a smaller scale. USHA projects of this type which were started during the first half of 1941 provided for 13,689 families.

The comparisons by population groups for publicly financed units show markedly the effect of housing developments around defense projects located in the less densely populated areas. Publicly financed units in cities of over 100,000 population had a 13-percent increase during the first half of 1941 as compared with the same period last

[1] Differences in timing of a few projects cause small discrepancies between this total and those quoted by other sources.

year; smaller urban places an increase of 255 percent; and rural nonfarm areas a jump from 0 to 17,029 units. The estimate for privately financed dwelling units [2] shows an increase of 20 percent in the first half of 1941 as compared with the first half of 1940. No population group showed a gain smaller than 12 percent. For cities of over 100,000 population this increase was 22 percent; for smaller urban places, 16 percent; and for rural nonfarm areas, 22 percent. Further details on the distribution by population group of privately and publicly financed units are shown in table 3.

TABLE 3.—*New Dwelling Units in Nonfarm Areas, First 6 Months of 1940 and 1941, by Population Group and Source of Funds*

Area or population group (1940 census)	Total		Private funds		Public funds	
	First half of—		First half of—		First half of—	
	1941	1940	1941	1940	1941	1940
All nonfarm areas	318,545	242,749	264,874	221,333	53,671	21,416
Percent of change, 1940 to 1941	+31.2		+19.7		+150.6	
Urban (cities)	227,336	182,009	190,694	160,593	36,642	21,416
500,000 population and over	55,587	46,943	49,997	42,161	5,590	4,782
100,000 to 500,000 population	48,952	39,718	36,220	28,245	12,732	11,473
50,000 to 100,000 population	22,995	18,711	18,700	16,648	4,295	2,063
25,000 to 50,000 population	27,260	20,845	21,335	18,937	5,925	1,908
10,000 to 25,000 population	34,260	26,017	29,556	25,115	4,704	902
5,000 to 10,000 population	21,565	17,899	20,006	17,611	1,559	288
2,500 to 5,000 population	16,717	11,876	14,880	11,876	1,837	0
Rural nonfarm areas	91,209	60,740	74,180	60,740	17,029	0

Although the East North Central and South Atlantic States made the greatest gains during the first half of 1941 as compared with the same period last year, the Pacific region retained its leadership in terms of total new privately financed units. The South Atlantic States, with 13,513 new publicly financed units during the current half-year period, led all areas in publicly financed housing. The Middle Atlantic, Pacific, and New England States, with approximately 8,000 new public units each, were next in importance.

Privately financed units during the second quarter of 1941 showed a gain of 49 percent over the previous quarter and of 20 percent over the second quarter of 1940. Except for several minor decreases from the second quarter 1940 figure, all geographic divisions shared in these increases. Publicly financed units during the second quarter of 1941 increased 41 percent over the previous quarter and 185 percent over the same quarter of last year. Table 4 presents the estimates for each geographic division separately for privately and publicly financed units for the first and second quarters of 1941 and the second quarter of 1940.

[2] Homes financed with mortgages insured by the Federal Housing Administration are included in the totals of privately financed units.

TABLE 4.—*New Dwelling Units in Nonfarm Areas, Second Quarter of 1940 and First and Second Quarters of 1941, by Geographic Division and Source of Funds*

Geographic division	Total			Private funds			Public funds		
	Second quarter, 1941	First quarter, 1941	Second quarter, 1940	Second quarter, 1941	First quarter, 1941	Second quarter, 1940	Second quarter, 1941	First quarter, 1941	Second quarter, 1940
All divisions	189,673	128,872	143,427	158,295	106,579	132,426	31,378	22,293	11,001
New England	10,997	6,787	6,034	7,041	3,111	5,834	3,956	3,676	200
Middle Atlantic	30,413	18,218	21,191	23,109	16,933	18,501	7,304	1,285	2,690
East North Central	37,458	19,959	28,003	33,307	17,605	25,674	4,151	2,354	2,329
West North Central	12,284	5,710	11,074	10,727	5,017	11,074	1,557	693	0
South Atlantic	33,387	28,945	25,200	28,471	20,348	22,656	4,916	8,597	2,544
East South Central	9,788	6,429	8,387	7,876	5,650	6,268	1,912	779	2,119
West South Central	14,515	11,801	11,636	12,521	10,333	11,067	1,994	1,468	569
Mountain	5,795	4,048	6,002	5,373	3,664	5,452	422	384	550
Pacific	35,036	26,975	25,900	29,870	23,918	25,900	5,166	3,057	0

The permit valuation of the 319,000 new nonfarm dwelling units upon which construction was started during the first 6 months of 1941 is estimated at approximately $1,112,000,000. This represents an increase of 34 percent over the $827,000,000 estimate for the same period last year. The current total includes $943,000,000 for privately financed dwellings, $125,000,000 for publicly financed defense housing, and $44,000,000 for nondefense USHA projects. The dollar volume for publicly financed projects is computed from contract awards and is, therefore, approximately equivalent to a total of construction costs. Values given for privately financed units are in terms of permit valuations which generally understate costs.

The highest aggregate permit valuation during the first half of 1941 was shown in the East North Central States, where the total was $253,000,000. Other geographic divisions where permit valuations were more than $100,000,000 were the Pacific ($202,000,000), Middle Atlantic ($198,000,000), and South Atlantic ($191,000,000). Permit valuations of new nonfarm dwellings in each geographic division during the first half of 1941 are shown by type of financing in table 5.

TABLE 5.—*Permit Valuation of New Dwellings in Nonfarm Areas During First 6 Months of 1941, by Geographic Division and Source of Funds*

Geographic division	Estimated permit valuation		
	Total	Private funds	Public funds[1]
All divisions	$1,112,152,000	$943,440,000	$168,712,000
New England	71,518,000	45,455,000	26,063,000
Middle Atlantic	198,244,000	169,167,000	29,077,000
East North Central	253,049,000	232,391,000	20,658,000
West North Central	61,796,000	54,130,000	7,666,000
South Atlantic	190,941,000	151,554,000	39,387,000
East South Central	36,145,000	28,393,000	7,752,000
West South Central	69,505,000	59,428,000	10,077,000
Mountain	28,570,000	26,092,000	2,478,000
Pacific	202,384,000	176,830,000	25,554,000

[1] Contract values.

SUMMARY OF BUILDING CONSTRUCTION IN PRINCIPAL CITIES, AUGUST 1941 [1]

AUGUST building permit valuations for all classes of construction combined declined 16.0 percent from the July level. The decline in permit valuations for new residential construction amounted to only 1.8 percent, while permit valuations for new nonresidential construction were 42.1 percent under the July figure. Permit valuations of additions, alterations, and repairs to existing structures were 4.9 percent less than in July.

Building permit valuations were 5.7 percent lower than in the corresponding month in 1940. Although all types of construction combined showed a decline, permit valuations for new residential construction increased 24.9 percent from August 1940. New nonresidential construction, however, declined 45.7 percent from August 1940 when large numbers of contracts were awarded for additional facilities necessary for the national-defense program. Additions, alterations, and repairs to existing structures were 4.9 percent under the August 1940 level.

Comparison of August 1941 with July 1941 and August 1940

A summary of building construction in 2,137 identical cities in August 1941, with percentage changes from July 1941 and August 1940 is given in table 1.

TABLE 1.—*Summary of Building Construction for Which Permits Were Issued in 2,137 Identical Cities, August 1941*

Class of construction	Number of buildings			Permit valuation		
	August 1941	Percentage change from—		August 1941	Percentage change from—	
		July 1941	August 1940		July 1941	August 1940
All construction	87,468	+0.1	+7.2	$235,176,730	−16.0	−5.7
New residential	31,361	+2.2	+14.8	145,775,691	−1.8	+24.9
New nonresidential	14,734	+6.0	+6.8	55,532,748	−42.1	−45.7
Additions, alterations, and repairs	41,373	−3.4	+2.3	33,868,291	−4.9	+11.0

A summary of permit valuations and the number of family-dwelling units provided in new dwellings in 2,137 identical cities, having a population of 1,000 and over, is shown in table 2 for August 1941 with percentage changes from July 1941 and August 1940.

[1] More detailed information by geographic division and individual cities is given in a separate pamphlet entitled "Building Construction, August 1941," copies of which will be furnished upon request.

TABLE 2.—*Number and Permit Valuation of New Dwelling Units, August 1941, by Source of Funds and Type of Dwelling* [1]

Source of funds and type of dwelling	Number of dwelling units			Permit valuation		
	August 1941	Percentage change from—		August 1941	Percentage change from—	
		July 1941	August 1940		July 1941	August 1940
All types	36,868	−3.8	+14.3	$144,361,623	−2.0	+25.9
Privately financed	29,445	−16.5	+7.0	115,911,609	−14.8	+15.3
1-family	24,931	−6.9	+11.4	104,108,082	−6.8	+19.8
2-family [2]	2,121	+8.4	+24.0	5,638,991	+8.0	+23.3
Multifamily [3]	2,393	−63.3	−30.2	6,164,536	−67.7	−32.4
Publicly financed	7,423	+143.0	+56.6	28,450,014	+151.6	+101.2

[1] Based on reports from cities with a population of 1,000 and over, the cities being identical for any given month of both years.
[2] Includes 1- and 2-family dwellings with stores.
[3] Includes multifamily dwellings with stores.

Construction During First 8 Months, 1940 and 1941

Cumulative totals for the first 8 months of 1941 compared with the same months of the preceding year are shown in table 3. The data are based on reports received from cities having a population of 1,000 and over.

TABLE 3.—*Permit Valuation of Building Construction, First 8 Months of 1940 and 1941, by Class of Construction* [1]

Class of construction	Permit valuation		
	First 8 months of—		Percentage change
	1941	1940	
All construction	$1,893,150,078	$1,537,716,629	+23.1
New residential	1,035,348,530	821,060,861	+26.1
New nonresidential	604,183,840	482,090,173	+25.3
Additions, alterations, and repairs	253,617,708	234,565,595	+8.1

[1] Based on reports from cities with a population of 1,000 and over, the cities being identical for any given month of both years.

Table 4 presents the permit valuation and number of family-dwelling units provided in cities with a population of 1,000 and over, for the first 8 months of 1940 and 1941.

TABLE 4.—*Number and Permit Valuation of New Dwelling Units, First 8 Months of 1940 and 1941, by Source of Funds and Type of Dwelling* [1]

Source of funds and type of dwelling	Number of dwelling units			Permit valuation		
	First 8 months of—		Percentage change	First 8 months of—		Percentage change
	1941	1940		1941	1940	
All types	275,127	225,056	+22.2	$1,023,862,103	$804,474,529	+27.3
Privately financed	232,362	194,706	+19.3	883,391,793	714,294,206	+23.7
1-family	177,579	149,602	+18.7	730,482,583	587,397,682	+24.4
2-family [2]	15,228	11,513	+32.3	39,526,972	29,198,400	+35.4
Multifamily [3]	39,555	33,591	+17.8	113,382,238	97,698,124	+16.1
Publicly financed	42,765	30,350	+40.9	140,470,310	90,180,323	+55.8

[1] Based on reports from cities with a population of 1,000 and over, the cities being identical for any given month of both years.
[2] Includes 1- and 2-family dwellings with stores.
[3] Includes multifamily dwellings with stores.

Analysis by Size of City, August 1941

Table 5 shows the value of permits issued for building construction in August 1941 with percentage changes from July 1941 and August 1940, by size of city and by class of construction.

TABLE 5.—*Permit Valuation of Various Classes of Building Construction in 2,137 Identical Cities, August 1941, by Size of City*

Size of city	Number of cities reporting	Total construction			New residential buildings		
		Permit valuation, August 1941	Percentage change from—		Permit valuation, August 1941	Percentage change from—	
			July 1941	August 1940		July 1941	August 1940
Total, all reporting cities	2,137	$235,176,730	−16.0	−5.7	$145,775,691	−1.8	+24.9
500,000 and over	14	59,145,067	−23.8	−32.4	39,139,635	+6.3	+26.8
100,00 and under 500,000	78	52,671,289	−24.3	+22.6	31,112,409	−12.5	+26.7
50,000 and under 100,000	104	27,121,507	−7.8	−10.4	14,789,180	−.1	−13.6
25,000 and under 50,000	197	32,765,131	+2.6	+25.0	17,453,100	−1.6	+19.3
10,000 and under 25,000	455	37,180,380	−8.3	+37.4	25,503,431	+16.7	+72.9
5,000 and under 10,000	425	14,640,943	−18.1	−45.6	10,065,276	−29.3	+11.0
2,500 and under 5,000	433	8,255,596	−14.1	+41.6	5,134,865	−4.8	+22.1
1,000 and under 2,500	431	3,396,817	+.3	+26.3	2,577,795	+27.2	+65.6

Size of city	New nonresidential buildings			Additions, alterations, and repairs			Population (census of 1940)
	Permit valuation, August 1941	Percentage change from—		Permit valuation, August 1941	Percentage change from—		
		July 1941	August 1940		July 1941	August 1940	
Total, all reporting cities	$55,532,748	−42.1	−45.7	$33,868,291	−4.9	+11.0	64,349,819
500,000 and over	9,668,316	−67.7	−79.2	10,337,116	−4.5	+2.6	22,367,825
100,000 and under 500,000	13,188,412	−46.7	+16.4	8,370,468	−9.5	+18.2	15,620,164
50,000 and under 100,000	8,215,786	−19.1	−14.0	4,116,541	−7.6	+14.8	7,154,747
25,000 and under 50,000	10,535,445	+11.8	+33.2	4,777,586	+.1	+29.6	6,912,170
10,000 and under 25,000	7,955,057	−46.8	−6.2	3,721,892	+.2	−3.1	7,026,013
5,000 and under 10,000	3,130,595	+35.4	−80.9	1,445,072	+8.2	+.8	2,993,350
2,500 and under 5,000	2,277,80	−33.0	+131.6	843,651	+3.8	+31.7	1,552,982
1,000 and under 2,500	563,057	−39.4	−40.7	255,965	−40.6	+39.5	722,568

The permit valuation and number of new dwelling units provided, by type of dwelling and size of city, in the 2,137 identical cities reporting for July and August 1941, are given in table 6.

TABLE 6.—*Number and Permit Valuation of New Dwelling Units in 2,137 Identical Cities, August 1941, by Size of City and Type of Dwelling*

Size of city	Permit valuation of housekeeping dwellings			Number of families provided for in—							
				All types		1-family dwellings		2-family dwellings[1]		Multifamily dwellings[2]	
	August 1941	July 1941	Percentage change	August 1941	July 1941	August 1941	July 1941	August 1941	July 1941	August 1941	July 1941
Total, all reporting cities	$144,361,623	$147,328,965	−2.0	36,868	38,320	29,586	28,721	2,269	2,256	5,013	7,343
500,000 and over	39,130,010	36,302,867	+7.8	9,757	9,331	6,485	5,752	902	626	2,370	2,953
100,000 and under 500,000	30,991,909	35,474,566	−12.6	8,417	9,808	6,448	6,510	487	524	1,482	2,774
50,000 and under 100,000	14,608,380	14,655,424	−.3	3,922	3,963	3,106	2,942	247	259	569	762
25,000 and under 50,000	16,720,100	17,511,278	−4.5	4,323	4,784	3,631	3,880	326	462	366	442
10,000 and under 25,000	25,374,931	21,839,332	+16.2	6,202	5,256	5,893	4,670	166	277	143	309
5,000 and under 10,000	10,007,476	14,142,468	−29.2	2,378	3,385	2,239	3,238	77	62	62	85
2,500 and under 5,000	4,999,222	5,376,390	−7.0	1,233	1,287	1,183	1,256	29	25	21	6
1,000 and under 2,500	2,529,595	2,026,640	+24.8	636	506	601	473	35	21	0	12

[1] Includes 1- and 2-family dwellings with stores.
[2] Includes multifamily dwellings with stores.

The information on building permits issued is based on reports received by the Bureau of Labor Statistics from 2,137 identical cities having a population of 1,000 and over.

The information is collected by the Bureau of Labor Statistics from local building officials, except in the States of Illinois, Massachusetts, New Jersey, and Pennsylvania, where the State departments of labor collect and forward the information to the Bureau. In New York and North Carolina the information from the smaller cities is collected by the Bureau of Labor Statistics from local building officials and the information from the larger cities is collected and forwarded to the Bureau by the State departments of labor. The permit valuations shown in this report are estimates made by prospective builders on applying for permits to build. No land costs are included. Only building projects within the corporate limits of the cities enumerated are included in the Bureau's tabulation. The data collected by the Bureau of Labor Statistics show, in addition to private and municipal construction, the value of buildings for which contracts were awarded by the Federal and State governments in the cities included in the report. For August 1941 the value of these buildings amounted to $38,199,000, for July 1941 to $48,071,000 and for August 1940 to $67,468,000.

Construction From Public Funds

The value of contracts awarded and force-account work started during August 1941, July 1941, and August 1940 on construction projects financed wholly or partially from various Federal funds is shown in table 7.

TABLE 7.—*Value of Contracts Awarded and Force-Account Work Started on Construction Projects Financed From Federal Funds, July and August 1941 and August 1940*[1]

Federal agency	Contract awarded and force-account work started		
	August 1941	July 1941 [2]	August 1940 [2]
Total	$236,891,888	$188,242,589	$234,251,806
Public Works Administration:			
Federal	0	14,486	16,388
Non-Federal:			
N. I. R. A	0	0	30,441
E. R. A. A	0	0	286,437
P. W. A. A., 1938	0	0	583,247
Federal agency projects under the WPA	194,951	617,576	3,404,278
Regular Federal appropriations	225,707,345	183,237,744	209,661,230
United States Housing Authority	10,989,592	4,372,783	20,269,785

[1] Preliminary, subject to revision.
[2] Revised.

The value of public-building and highway construction awards financed wholly from appropriations from State funds, as reported by the various State governments for August 1941, July 1941, and August 1940 is shown in the following statement:

	Public buildings	*Highway construction*
August 1941	$1,338,184	$13,481,347
July 1941	1,636,709	16,834,176
August 1940	4,366,941	12.910,673

Retail Prices

FOOD PRICES IN AUGUST 1941

THE average retail cost of food on August 12 reached the highest level in 10 years, after a further advance of 1.2 percent between July 15 and August 12. Country-wide increases were reported for bread, fresh milk, canned goods, beef, pork, coffee, and shortening, while such foods as lamb, chicken, apples, and most of the fresh vegetables were selling at seasonally low levels. There are many factors accounting for the advance in food prices. Chief among them are increased employment with consequent greater consumer demand, large Government purchases, and some speculative buying. Preliminary reports for the last half of August indicate that the rise has continued.

The Bureau's index of retail food costs for August 12, 1941, was 108.0 percent of the 1935–39 average, 12.3 percent higher than for August 1940. Price increases at retail since August of last year were particularly marked for pork, lard, and vegetable shortening, dairy products, and the green vegetables—cabbage, lettuce, and spinach. On August 12 prices for most of these foods ranged from 20 to 50 percent higher than a year ago. Increases of 14 to 18 percent were reported for canned pink salmon, coffee, and sugar and advances of 7 to 14 percent for several other foods including canned fruits and vegetables, flour, milk, oranges, and fresh fish. Only 6 of the 54 foods—macaroni, corn flakes, soda crackers, apples, fresh green beans, and sweetpotatoes—were selling at lower prices than in August 1940.

Details by Commodity Groups

Bread prices rose in 30 of the 51 cities between mid-July and mid-August in the most widespread advance in recent years. Increases ranging from 0.5 cent to 1.5 cents per pound were quite common, especially in the New England, Middle Atlantic, and North Central areas. Flour prices continued to increase, rising by more than 1 percent to a point 12 percent higher than a year ago. Except for corn flakes, which increased 1.4 percent during the month, prices for other cereals and bakery products remained unchanged or declined slightly between July and August. As a group, cereals and bakery products were 2.9 percent higher than last month.

The cost of meats consumed by the average moderate-income family advanced 2.3 percent between July 15 and August 12. Increases were reported from all cities, ranging from 0.1 percent in Detroit to 7.3 percent in Memphis. Prices of beef and pork moved up more than usual for the late summer, reflecting heavy purchases of pork products by the Government and a marked increase in consumer demand. Beef prices were up 3.1 percent, fresh pork 4.0 percent, and cured pork 2.4 percent. Pork prices were 29 percent higher than the unusually low level of August 1940 and 9.5 percent above the 5-year average for the years 1935–39. Lamb and chicken prices declined seasonally by about 1.5 percent, while prices of fresh fish and canned pink salmon increased 3 percent and 6.2 percent, respectively. Canned pink salmon prices were 17.6 percent higher than in August 1940. Preliminary reports of prices on canned pink salmon for the last 2 weeks of August indicate a continued price rise.

Dairy products as a group cost 16 percent more than a year ago, reflecting, to a large extent, increased purchases by the Government since early this year as well as larger buying by individual consumers. Prices of fresh milk advanced in 16 of the 51 cities between July 15 and August 12 and preliminary reports indicate advances in other cities since mid-August. The increases ranged from 0.5 cent per quart in Los Angeles and New York to 3 cents per quart in Little Rock. Prices of cheese and evaporated milk increased in all cities covered by the survey. Butter prices, on the other hand, declined in all cities, contrary to the usual seasonal movement, but they were still about 24 percent higher than in August 1940. Egg prices advanced seasonally 5.2 percent and were 31.6 percent higher than a year ago.

Prices for fresh fruits and vegetables as a whole continued to decline between mid-July and mid-August as new supplies came on the market from producing areas in the northern part of the country. Prices of onions and potatoes, two of the most important fresh vegetables, dropped sharply—onions by 36.2 percent and potatoes by 18.4 percent. Even with these marked declines from the July levels, these two vegetables were still selling at higher prices than in August 1940, as supplies were somewhat smaller and demand greater than a year ago. Prices of carrots and sweetpotatoes were down 3.8 percent and 12.3 percent, respectively, during this month. With considerably larger supplies this year, sweetpotatoes were about 11 percent lower in price than a year ago. Prices of cabbage advanced 2.4 percent between mid-July and mid-August in a contraseasonal movement resulting from the short crop, and prices were 45 percent higher this August than a year earlier. Price declines were reported for green beans and lettuce and there was a sharp seasonal advance for spinach. There were also marked price changes for fresh fruits. Orange prices rose sharply following a reduction in Florida shipments since mid-July with a consequent increase in prices of California Valencias.

However, apple prices declined 19 percent between July 15 and August 12 as is usual for this period, while banana prices moved upward slightly, contrary to their usual trend at this time of year. More plentiful supplies of apples this year as compared with August 1940 resulted in a price 8 percent lower this year. Prices of both bananas and oranges, however, were about 13 percent higher than a year earlier.

Canned fruits and vegetables advanced 2.2 percent between mid-July and mid-August and were 7.3 percent higher than a year earlier. The carry-over of canned fruits and vegetables was the lightest in recent years, largely as the result of heavy Government and consumer buying in the last few months of the 1940–41 season. Canned peaches showed the greatest rise during the month, 6.6 percent, with canned tomatoes selling 2.2 percent higher than in mid-July. Prices of canned peaches, tomatoes, and corn were from 12 to 13 percent higher than in August 1940. Canned peas showed very little change during the month and were at about the same price level as a year ago. Prices of dried prunes likewise showed very little change. Prices of navy beans rose 4 percent during the month largely as a result of Government purchases and were 18 percent higher than last year.

Prices of coffee, tea, and sugar continued their earlier advances. Coffee and sugar were more than 14 percent higher than last year, reflecting shipping difficulties and speculative activity during the year.

Fats and oils as a group, following the trend in wholesale prices, advanced in price 2.7 percent between mid-July and mid-August and were 21.4 percent higher than in August 1940. As has been true in the past, increases in these prices reflect higher shipping costs for imported materials, Government purchases, and some forward buying. Price advances between July 15 and August 12 ranged from 1.7 percent for peanut butter to 5.2 percent for shortening other than lard packed in cartons. Compared with a year ago, lard prices were 52.2 percent higher in August 1941 and shortening in cartons 37.6 percent higher. Prices of shortening in other containers, salad dressing, and oleomargarine averaged about 9 percent higher than a year earlier, and peanut butter was 1.7 percent higher.

Indexes of retail costs of food for August, July, and June 1941 and for selected months in 1940, 1939, and 1929, are presented in table 1. This table shows the present and recent levels of food costs compared with a year ago, with costs prevailing before the outbreak of the European war, and with the level of August 1929. The accompanying chart shows the trend in costs of all foods (1935–39=100) and of each major commodity group for the period January 1929 to August 1941, inclusive.

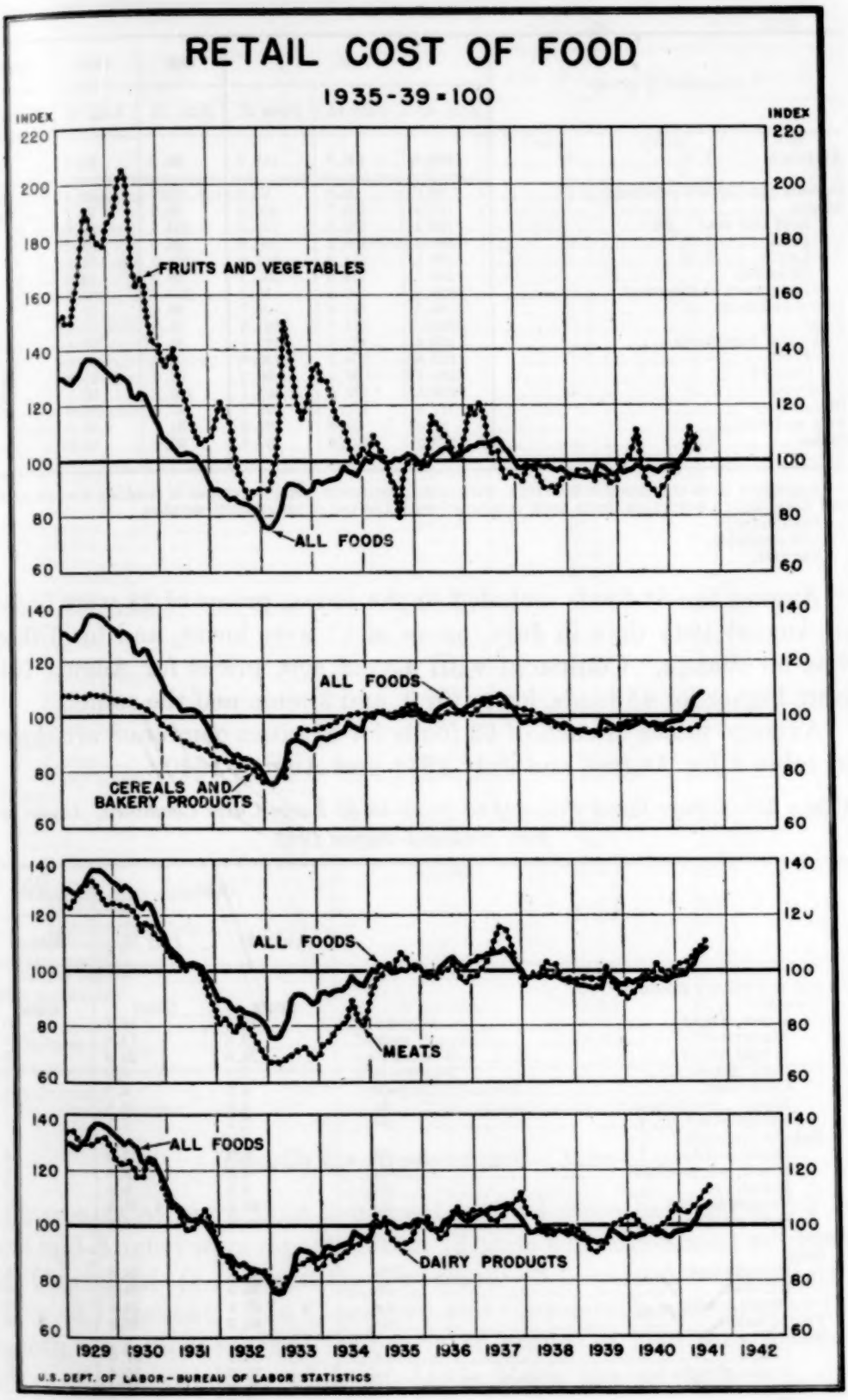
RETAIL COST OF FOOD
1935-39=100
INDEX
220
200
180
160
140
120
100
80
60
FRUITS AND VEGETABLES
ALL FOODS
ALL FOODS
CEREALS AND BAKERY PRODUCTS
ALL FOODS
MEATS
ALL FOODS
DAIRY PRODUCTS
1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942
U.S. DEPT. OF LABOR - BUREAU OF LABOR STATISTICS

TABLE 1.—*Indexes of Retail Costs of Food in 51 Large Cities Combined,*[1] *by Commodity Groups, August, July, and June 1941, August 1940, August 1939, and June 1929*

[1935-39=100]

Commodity group	1941			1940	1939	1929
	Aug. 12[2]	July 15	June 17	Aug. 13	Aug. 15	June 15
All foods	108.0	106.7	105.9	96.2	93.5	131.3
Cereals and bakery products	99.0	96.2	95.9	96.8	93.4	107.1
Meats	111.2	108.7	106.8	99.2	95.7	129.4
Beef and veal	112.1	108.6	107.2	105.7	99.6	[3]
Pork	109.5	106.1	100.9	85.0	88.0	[3]
Lamb	109.8	111.5	113.6	105.0	98.8	[3]
Chickens	103.1	104.5	105.7	98.6	94.6	[3]
Fish, fresh and canned	125.5	120.4	118.5	109.7	99.6	[3]
Dairy products	114.5	112.3	109.7	99.0	93.1	129.0
Eggs	120.7	114.7	104.4	91.7	90.7	121.8
Fruit and vegetables	103.4	107.0	112.1	93.5	92.4	168.6
Fresh	103.8	109.3	116.5	93.4	92.8	173.1
Canned	100.1	97.9	96.2	92.3	91.6	126.0
Dried	109.1	[4] 106.5	105.1	100.8	90.3	168.9
Beverages	103.8	101.4	98.7	92.3	94.9	165.5
Fats and oils	99.2	96.6	92.5	81.7	84.5	127.5
Sugar	109.0	107.8	107.4	95.4	95.6	110.8

[1] Aggregate costs of 54 foods in each city, weighted to represent total purchases of families of wage earners and lower-salaried workers, have been combined with the use of population weights.
[2] Preliminary.
[3] Not available.
[4] Revised.

Among the 54 foods included in the index, prices of 38 were higher in August 1941 than in July, prices of 13 were lower, and for 3 there was no change. Compared with a year ago, prices for August 1941 were higher for 45 foods, lower for 6, and 3 remained the same.

Average prices of each of 63 foods for 51 cities combined are shown in table 2 for August and July 1941 and August 1940.

TABLE 2.—*Average Retail Prices of 63 Foods in 51 Large Cities Combined, August and July 1941 and August 1940*

Article		1941		1940
		Aug. 12[1]	July 15	Aug. 13
Cereals and bakery products:				
Cereals:		*Cents*	*Cents*	*Cents*
Flour, wheat	10 pounds	46.6	46.1	41.6
Macaroni	pound	13.8	13.8	14.0
Wheat cereal[2]	28-ounce pkg.	23.6	23.5	23.6
Corn flakes	8-ounce pkg.	7.1	7.0	7.2
Corn meal	pound	4.3	4.3	4.2
Rice[2]	do.	8.9	8.8	8.0
Rolled oats[2]	do.	7.1	7.1	7.2
Bakery products:				
Bread, white	do.	8.3	7.9	8.1
Bread, whole-wheat	do.	9.0	8.8	9.0
Bread, rye	do.	9.5	9.0	9.4
Vanilla cookies	do.	25.6	25.8	24.8
Soda crackers	do.	15.0	15.1	15.1
Meats:				
Beef:				
Round steak	do.	40.3	38.8	38.6
Rib roast	do.	30.9	30.3	29.8
Chuck roast	do.	25.4	24.6	23.8
Veal: Cutlets	do.	48.4	46.6	43.1
Pork:				
Chops	do.	38.4	[3] 37.0	31.5
Bacon, sliced	do.	36.0	35.4	26.6
Ham, sliced[2]	do.	52.5	51.4	44.0
Ham, whole	do.	33.3	32.3	24.8
Salt pork	do.	20.0	19.7	14.1

See footnotes at end of table.

TABLE 2.—*Average Retail Prices of 63 Foods in 51 Large Cities Combined, August and July 1941 and August 1940*—Continued

Article		1941		1940
		Aug. 12 [1]	July 15	Aug. 13
Meats—Continued.				
Lamb:		*Cents*	*Cents*	*Cents*
Leg	pound	29.9	30.2	28.8
Rib chops	do	40.1	40.8	38.2
Poultry: Roasting chickens	do	32.9	33.5	31.6
Fish:				
Fresh, frozen	do	(4)	(4)	(4)
Salmon, pink	16-ounce can	18.7	17.6	15.9
Salmon, red [2]	do	30.6	28.8	25.8
Dairy products:				
Butter	pound	42.2	[3] 43.0	34.1
Cheese	do	31.3	[3] 30.1	25.5
Milk, fresh (delivered)	quart	13.8	13.4	12.6
Milk, fresh (store)	do	12.8	12.3	11.3
Milk, fresh (delivered and store) [2]	do	13.4	13.0	12.2
Milk, evaporated	14½-ounce can	8.2	7.8	7.0
Eggs	dozen	42.7	40.6	32.3
Fruits and vegetables:				
Fresh:				
Apples	pound	4.7	5.8	5.1
Bananas	do	7.2	7.1	6.4
Oranges	dozen	35.2	[3] 29.5	31.2
Beans, green	pound	9.1	9.7	9.6
Cabbage	do	4.2	4.1	2.9
Carrots	bunch	5.1	5.3	4.9
Lettuce	head	9.9	10.0	7.5
Onions	pound	4.4	6.9	4.2
Potatoes	15 pounds	34.1	41.8	30.9
Spinach	pound	9.7	7.0	7.3
Sweetpotatoes	do	5.7	6.5	6.4
Canned:				
Peaches	No. 2½ can	19.3	18.1	17.1
Pineapple	do	21.6	21.3	21.0
Beans, green [2]	No. 2 can	10.9	10.8	9.9
Corn	do	11.8	11.6	10.5
Peas	do	13.6	13.6	13.6
Tomatoes	do	9.4	9.2	8.4
Dried:				
Prunes	pound	9.8	9.7	9.8
Navy beans	do	7.8	7.5	6.6
Beverages:				
Coffee	do	24.3	23.7	21.2
Tea	¼ pound	18.6	18.2	17.5
Cocoa [2]	8-ounce can	9.1	9.1	9.1
Fats and oils:				
Lard	pound	14.0	13.7	9.2
Shortening, other than lard:				
In cartons	do	16.1	15.3	11.7
In other containers	do	21.0	20.4	19.1
Salad dressing	pint	22.4	[3] 21.8	20.6
Oleomargarine	pound	17.2	16.8	15.8
Peanut butter	do	18.3	18.0	18.0
Sugar and sweets:				
Sugar	10 pounds	58.5	57.9	51.3
Corn sirup [2]	24-ounce can	14.0	13.9	13.6
Molasses [2]	18-ounce can	13.4	13.4	13.4

[1] Preliminary.
[2] Not included in index.
[3] Revised.
[4] Composite prices not computed.

Details by Regions and Cities

Increases of more than 2 percent in food costs between mid-July and mid-August were reported from 13 cities with the largest advances in Cincinnati (4.1 percent), Cleveland (3.1 percent), and Little Rock (3.1 percent). In Cincinnati and Cleveland advances over the month were more marked for nearly all groups of food than in other parts of the country, while in Little Rock the advance was due

almost entirely to the unusually large increase of 3 cents per quart for fresh milk. Food costs were lower in August than in July in only 4 cities, Fall River (0.4 percent) and Columbus, Detroit, and Louisville, all of which declined 0.1 percent. Compared with a year ago, food costs are now from 15 to 17 percent higher in 10 cities, from 12 to 15 percent higher in 25 cities, and from 9 to 12 percent higher in 16 cities.

Indexes of food costs by cities are presented in table 3 for August and July 1941 and August 1940.

TABLE 3.—*Indexes of the Average Retail Cost of All Foods, by Cities,*[1] *August and July 1941 and August 1940*

[1935-39=100]

Region and city	1941		1940	Region and city	1941		1940
	Aug. 12[2]	July 15	Aug. 13		Aug. 12[2]	July 15	Aug. 13
United States	108.0	106.7	96.2	West North Central—Continued.			
New England:				St. Louis	109.4	108.5	96.1
Boston	107.3	104.7	95.7	St. Paul	104.8	103.9	94.2
Bridgeport	108.4	107.6	96.7	South Atlantic:			
Fall River	107.1	107.5	96.3	Atlanta	107.1	105.2	92.2
Manchester	108.4	107.1	96.5	Baltimore	109.6	[4] 108.6	94.6
New Haven	107.2	[4] 105.9	96.2	Charleston, S. C	107.9	107.6	95.5
Portland, Maine	108.0	[4] 106.3	[4] 96.6	Jacksonville	113.6	[4] 111.4	100.0
Providence	108.9	[4] 107.0	96.5	Norfolk[3]	110.8	108.4	96.4
Middle Atlantic:				Richmond	107.5	105.1	[4] 91.8
Buffalo	111.8	110.8	97.8	Savannah	114.8	[4] 113.5	98.1
Newark	108.0	106.1	98.5	Washington, D. C	107.5	105.7	96.3
New York	107.8	107.0	[4] 98.0	East South Central:			
Philadelphia	104.7	[4] 103.3	94.2	Birmingham	106 8	105.2	[4] 93.7
Pittsburgh	109.0	108.7	95.4	Louisville	107.8	107.9	93.3
Rochester	110.2	109.7	98.8	Memphis	108.2	[4] 105.7	93.3
Scranton	108.6	106.8	95.5	Mobile	112.3	110.4	[4] 98.3
East North Central:				West South Central:			
Chicago	108.1	107.5	96.7	Dallas	103.8	100.9	92.1
Cincinnati	109.1	[4] 104.8	94.1	Houston	109.5	108.7	99.4
Cleveland	112.1	108.7	[4] 98.4	Little Rock	108.1	104.9	93.4
Columbus, Ohio	104.4	104.5	90.1	New Orleans	114.7	112.0	101.5
Detroit	107.1	107.2	95.3	Mountain:			
Indianapolis	108.5	106.9	95.3	Butte	107.4	106.8	97.8
Milwaukee	107.1	106.8	95.5	Denver	105.8	104.2	92.6
Peoria	111.0	110.2	97.7	Salt Lake City	106.8	106.7	97.7
Springfield, Ill	107.6	106.7	96.6	Pacific:			
West North Central:				Los Angeles	109.3	107.2	97.5
Kansas City	101.8	101.2	89.2	Portland, Oreg	114.4	[4] 111.5	99.8
Minneapolis	110.0	108.2	95.4	San Francisco	108.2	107.2	96.2
Omaha	105.7	103.4	96.7	Seattle	112.2	109.3	100.4

[1] Aggregate costs of 54 foods in each city, weighted to represent total purchases of families of wage earners and lower-salaried workers, have been combined for the United States with the use of population weights. Primary use is for time-to-time comparisons rather than place-to-place comparisons.
[2] Preliminary.
[3] Include Portsmouth and Newport News.
[4] Revised.

Wholesale Prices

WHOLESALE PRICES IN AUGUST 1941

THE upward movement in wholesale commodity prices continued unabated through August, marking a 7-month period of steadily rising prices. Foodstuff prices, under the impetus of heavy buying, were largely responsible for an increase during August of 1.7 percent in the Bureau of Labor Statistics index of approximately 900 price series. The general level of wholesale commodity prices, at 90.3 percent of the 1926 average, was 16.7 percent higher than a year ago, and nearly three-fourths of the rise occurred after February. Since the outbreak of the war the index has risen 20.4 percent.

Although the advance was widespread it was concentrated largely in agricultural commodity markets, as further attempts were made by the Government to control prices for many industrial commodities. Prices for manufactured products are beginning to reflect earlier sharp advances in prices of raw materials. Both groups rose more than 1½ percent during the month. Raw materials were, however, 25½ percent higher than a year ago; while manufactured products increased 13 percent since August 1940.

Prices for most commodities are substantially higher than they were a year ago. Farm products have risen over 33 percent; grains, 34 percent; and livestock and poultry, 38½ percent. Wholesale prices of foods are 24.4 percent higher than they were a year ago, largely because of increases of nearly 40 percent for "other foods" (which includes imported foods such as coffee, tea, cocoa, sugar, and pepper), of 28 percent for meats, and of 21 percent for dairy products.

Textile product prices are 22 percent higher than in August 1940, with cotton goods 48 percent higher, and "other textile products" (including burlap, jute, hemp, and sisal) over 34½ percent higher. Other outstanding changes during the year were rises of 123 percent for industrial fats and oils, 46 percent for cattle feed, 45 percent for hides and skins, 29 percent for lumber, and about 25 percent for petroleum products.

Further advances in prices for farm products caused the group index to rise 1.9 percent in August. Quotations were higher for all grains. Rye advanced 15 percent; barley, 8 percent; oats, 6 percent; and

[1] More detailed information on wholesale prices is given in the Wholesale Price pamphlet and will be furnished upon request.

wheat, over 5 percent. Quotations were also higher for cotton, hay, hops, and tobacco; for fresh milk, oranges, apples, and sweetpotatoes; and for calves, cows, hogs, and sheep. Steers and live poultry declined, and prices were also lower for lemons, onions, potatoes, and wool.

The advance of 3 percent in food prices at wholesale was due largely to increases of about 4 percent for meats, 3 percent for dairy products, and more than 1 percent for cereal products and fruits and vegetables. Higher prices were reported for canned, fresh, and powdered milk, cheese, flour, corn meal, most canned and dried fruits, canned vegetables, and bananas; for cured and fresh beef and pork, and veal; for tea, coffee, cocoa beans, canned red salmon, jelly, molasses, and peanut butter; and for pepper, salt, and sugar. Prices for most edible fats and oils averaged lower. Lard dropped 1.4 percent and butter, 0.2 percent. Oleo, corn, and soybean oils declined from about 1½ to 4½ percent. Dressed poultry and canned pink salmon prices weakened during August.

A reaction in prices for goatskins caused the hide and skin index to recede slightly from its high level of 112.5 percent of the 1926 average in July. Leather prices continued to advance and prices were also higher for leather manufactures such as shoes, harness, and luggage.

Cotton goods rose 5.6 percent to a 13-year peak as a result of sharp advances in prices for broadcloth, denim, duck, flannel, osnaburg, print cloth, tire fabrics, toweling, ticking, sheeting, and yarns. Woolen and worsted goods advanced 1.8 percent, clothing and hosiery and underwear rose nearly 1½ percent, and pronounced increases were reported in prices for hemp, jute, and sisal, and for artificial leather and cordage. Burlap prices were 8.9 percent lower in August than a month ago.

Prices for coal and for petroleum products, particularly gasoline and Pennsylvania crude and fuel oils, continued to rise.

The primary metal markets remained comparatively steady under Government regulation of prices. The group index advanced 0.1 percent during the month and was less than 4 percent higher than a year ago. Quicksilver advanced slightly. Prices for certain types of farm machinery and agricultural implements were higher. The index for nonferrous metals dropped 0.4 percent because of lower prices for pig tin.

Wholesale prices of building materials advanced 2.3 percent, as lumber, paint materials, and millwork prices continued upward. Quotations were higher for birch, gum, chestnut, maple, oak, yellow and Ponderosa pine and spruce; for brick and tile; for tung oil, rosin, and turpentine; for plumbing and heating fixtures; for doors, frames, windows, and sash; and for sand, gravel, prepared roofing, sewer pipe, and tar. Linseed oil declined.

TABLE 1.—*Index Numbers of Wholesale Prices by Groups and Subgroups of Commodities, August 1941 With Comparisons for July 1941 and August 1940*

[1926=100]

Group and subgroup	August 1941	July 1941	Change from a month ago	August 1940	Change from a year ago
			Percent		*Percent*
All commodities	**90.3**	**88.8**	**+1.7**	**77.4**	**+16.7**
Farm products	**87.4**	**85.8**	**+1.9**	**65.6**	**+33.2**
Grains	79.6	76.3	+4.3	59.3	+34.2
Livestock and poultry	99.0	98.9	+.1	71.5	+38.5
Other farm products	82.0	79.9	+2.6	63.3	+29.5
Foods	**87 2**	**84.7**	**+3.0**	**70.1**	**+24.4**
Dairy products	90.3	87.7	+3.0	74.3	+21.5
Cereal products	81.5	80.3	+1.5	75.1	+8.5
Fruits and vegetables	70.3	69.4	+1.3	63.2	+11.2
Meats	97.5	93.8	+3.9	76.1	+28.1
Other foods	84.4	81.6	+3.4	60.4	+39.7
Hides and leather products	**110.2**	**109.4**	**+.7**	**96.9**	**+13.7**
Shoes	116.1	114.7	+1.2	107.0	+8.5
Hides and skins	112.2	112.5	−.3	77.1	+45.5
Leather	98.5	98.1	+.4	88.3	+11.6
Other leather products	103.7	102.7	+1.0	99.7	+4.0
Textile products	**88.3**	**86.2**	**+2.4**	**72.3**	**+22.1**
Clothing	95.1	93.9	+1.3	85.6	+11.1
Cotton goods	101.5	96.1	+5.6	68.6	+48.0
Hosiery and underwear	63.8	62.9	+1.4	61.5	+3.7
Rayon	29.5	29.5	0	29.5	0
Silk	52.0	51.4	+1.2	43.0	+20.9
Woolen and worsted goods	98.2	96 5	+1.8	83.7	+17.3
Other textile products	96.8	98.0	−1.2	71.9	+34.6
Fuel and lighting materials	**79.0**	**78.5**	**+.6**	**71.1**	**+11.1**
Anthracite	83.3	82.2	+1.3	79.0	+5.4
Bituminous coal	106.3	104.9	+1.3	96.2	+10.5
Coke	122.2	122.2	0	109.6	+11.5
Electricity	(1)	(1)	----------	72.4	----------
Gas	(1)	80.8	----------	84.5	----------
Petroleum and products	61.4	60.9	+.8	49.2	+24.8
Metals and metal products	**98.6**	**98.5**	**+.1**	**94.9**	**+3.9**
Agricultural implements	92.9	92.5	+.4	92.3	+.7
Farm machinery	93.9	93.5	+.4	93.5	+.4
Iron and steel	96.9	96.8	+.1	94.8	+2.2
Motor vehicles	100.4	100.4	0	95.6	+5.0
Nonferrous metals	84.4	84.7	−.4	79.1	+6.7
Plumbing and heating	86.8	83.2	+4.3	80.5	+7.8
Building materials	**105.5**	**103.1**	**+2.3**	[2] **93.3**	**+13.1**
Brick and tile	95.1	94.2	+1.0	90.1	+5.5
Cement	92.1	92.1	0	90.6	+1.7
Lumber	127.5	122.3	+4.3	98.4	+29.6
Paint and paint materials	93.3	91.6	+1.9	84.2	+10.8
Plumbing and heating	86.8	83.2	+4.3	80.5	+7.8
Structural steel	107.3	107.3	0	107.3	0
Other building materials	99.9	98.4	+1.5	93.4	+7.0
Chemicals and allied products	**86.0**	**85.2**	**+.9**	**76.7**	**+12.1**
Chemicals	87.5	87.3	+.2	84.8	+3.2
Drugs and pharmaceuticals	100.1	100.0	+.1	96.2	+4.1
Fertilizer materials	75.3	74.0	+1.8	68.0	+10.7
Mixed fertilizers	77.1	77.0	+.1	74.2	+3.9
Oils and fats	87.3	83.7	+4.3	39.1	+123.3
Housefurnishing goods	**95.4**	**94.4**	**+1.1**	**88.5**	**+7.8**
Furnishings	100.7	99.7	+1.0	94.8	+6.2
Furniture	89.9	88.9	+1.1	81.8	+9.9
Miscellaneous	**83.7**	**82.0**	**+2.1**	**76.7**	**+9.1**
Automobile tires and tubes	60.8	58.8	+3.4	58.8	+3.4
Cattle feed	108.8	104.2	+4.4	74.5	+46.0
Paper and pulp	100.7	98.8	+1.9	93.5	+7.7
Rubber, crude	47.8	46.0	+3.9	41.0	+16.6
Other miscellaneous	89.8	88.9	+1.0	82.8	+8.5
Raw materials	**87.6**	**86.1**	**+1.7**	**69.8**	**+25.5**
Semimanufactured articles	**89.5**	**87.9**	**+1.8**	**77.0**	**+16.2**
Manufactured products	**91.5**	**90.1**	**+1.6**	**81.0**	**+13.0**
All commodities other than farm products	**90.7**	**89.3**	**+1.6**	**79.9**	**+13.5**
All commodities other than farm products and foods	**90.8**	**89.7**	**+1.2**	**82.0**	**+10.7**

[1] Data not yet available.

[2] Revised.

Industrial fats and oils, particularly copra and tallow, rose 4.3 percent. Prices for insecticides, fatty acids, tin tetrachloride, and fertilizer materials advanced. Ergot dropped 3.6 percent.

Average wholesale prices for both furniture and furnishings were higher than a month ago. Blankets, sheets, pillow cases, tablecloths, window shades, and oil cloth were appreciably higher. Most types of furniture, both metal and wooden, advanced.

Cattle feed prices advanced 4.4 percent. Other outstanding increases were reported in prices for crude rubber, auto tires and tubes, and other manufactured rubber products. Woodpulp, boxboard, and paper continued to advance, and prices were also higher for cylinder oils and soap and for cooperage, batteries, and matches.

Index numbers for the groups and subgroups of commodities for July and August 1941 and August 1940 and the percentage changes from a month ago and a year ago are shown in table 1.

Index Numbers by Commodity Groups, 1926 to August 1941

Index numbers of wholesale prices by commodity groups for selected years from 1926 to 1940, inclusive, and by months from August 1940 to August 1941, inclusive, are shown in table 2.

The price trend for specified years and months since 1926 is shown in table 3 for the following groups of commodities: Raw materials,

TABLE 2.—*Index Numbers of Wholesale Prices by Groups of Commodities*

[1926=100]

Year and month	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting	Metals and metal products	Building materials	Chemicals and allied products	House-furnishing goods	Miscellaneous	All commodities
By years:											
1926	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1929	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.0	94.3	82.6	95.3
1932	48.2	61.0	72.9	54.9	70.3	80.2	71.4	73.9	75.1	64.4	64.8
1933	51.4	60.5	80.9	64.8	66.3	79.8	77.0	72.1	75.8	62.5	65.9
1936	80.9	82.1	95.4	71.5	76.2	87.0	86.7	78.7	81.7	70.5	80.8
1937	86.4	85.5	104.6	76.3	77.6	95.7	95.2	82.6	89.7	77.8	86.3
1938	68.5	73.6	92.8	66.7	76.5	95.7	90.3	77.0	86.8	73.3	78.6
1939	65.3	70.4	95.6	69.7	73.1	94.4	90.5	76.0	86.3	74.8	77.1
1940	67.7	71.3	100.8	73.8	71.7	95.8	94.8	77.0	88.5	77.3	78.6
By months:											
1940:											
August	65.6	70.1	96.9	72.3	71.1	94.9	[1] 93.3	76.7	88.5	76.7	77.4
September	66.2	71.5	98.3	72.5	71.0	95.4	[1] 95.6	76.8	88.5	76.5	78.0
October	66.4	71.1	100.4	73.6	71.6	97.3	97.8	76.9	88.6	76.9	78.7
November	68.2	72.5	102.3	74.5	71.9	97.6	98.9	77.5	88.6	77.5	79.6
December	69.7	73.5	102.3	74.8	71.7	97.6	99.3	77.7	88.9	77.3	80.0
1941:											
January	71.6	73.7	102.4	75.2	72.1	97.7	99.6	78.6	89.0	77.1	80.8
February	70.3	73.5	101.6	76.4	72.1	97.6	99.3	78.5	89.1	76.9	80.6
March	71.6	75.2	102.6	78.4	72.0	97.7	99.5	79.8	89.5	77.6	81.5
April	74.4	77.9	103.9	81.0	72.9	97.9	100.1	81.8	90.4	78.6	83.2
May	76.4	79.5	106.4	83.0	75.6	98.1	100.4	83.6	91.4	79.6	84.9
June	82.1	83.1	107.8	84.5	77.9	98.3	101.0	83.8	93.1	80.6	87.1
July	85.8	84.7	109.4	86.2	78.5	98.5	103.1	85.2	94.4	82.0	88.8
August	87.4	87.2	110.2	88.3	79.0	98.6	105.5	86.0	95.4	83.7	90.3

[1] Revised.

semimanufactured articles, manufactured products, commodities other than farm products, and commodities other than farm products and foods. The list of commodities included under the classifications "Raw materials," "Semimanufactured articles," and "Manufactured products" was given in Serial No. R. 1251, Wholesale Prices, December and Year 1940.

TABLE 3.—*Index Numbers of Wholesale Prices by Special Groups of Commodities*

[1926=100]

Year and month	Raw materials	Semimanufactured articles	Manufactured products	All commodities other than farm products	All commodities other than farm products and foods
By years:					
1926	100.0	100.0	100.0	100.0	100.0
1929	97.5	93.9	94.5	93.3	91.6
1932	55.1	59.3	70.3	68.3	70.2
1933	56.5	65.4	70.5	69.0	71.2
1936	79.9	75.9	82.0	80.7	79.6
1937	84.8	85.3	87.2	86.2	85.3
1938	72.0	75.4	82.2	80.6	81.7
1939	70.2	77.0	80.4	79.5	81.3
1940	71.9	79.1	81.6	80.8	83.0
By months:					
1940:					
August	69.8	77.0	81.0	79.9	82.0
September	70.5	77.6	81.5	80.4	82.3
By months—Con.					
1940—Con.					
October	71.4	79.4	82.1	81.3	83.5
November	72.6	80.7	82.6	81.9	84.1
December	73.6	80.7	82.8	82.1	84.1
1941:					
January	74.6	81.3	83.5	82.7	84.3
February	74.0	81.6	83.5	82.7	84.4
March	75.3	83.4	84.2	83.6	84.9
April	77.5	85.1	85.5	85.0	85.9
May	79.7	86.4	87.1	86.6	87.4
June	83.6	87.6	88.6	88.0	88.6
July	86.1	87.9	90.1	89.3	89.7
August	87.6	89.5	91.5	90.7	90.8

Weekly Fluctuations

Weekly fluctuations in the major commodity group classifications during July and August are shown by the index numbers in table 4.

TABLE 4.—*Weekly Index Numbers of Wholesale Prices by Commodity Groups, July and August 1941*

[1926=100]

Commodity group	Aug. 30	Aug. 23	Aug. 16	Aug. 9	Aug. 2	July 26	July 19	July 12	July 5
All commodities	90.6	90.0	89.6	89.6	89.2	88.8	88.3	88.1	87.7
Farm products	88.6	86.7	86.4	87.8	87.2	86.7	85.4	85.0	84.1
Foods	88.2	87.0	86.7	86.2	85.5	84.6	83.8	84.1	84.1
Hides and leather products	110.9	110.8	110.2	109.9	109.7	109.7	109.6	109.3	108.8
Textile products	87.6	87.3	87.4	87.1	86.6	86.4	85.0	84.3	84.1
Fuel and lighting materials	79.8	79.8	79.5	79.6	79.4	79.4	79.3	79.1	79.0
Metals and metal products	98.7	98.6	98.7	98.6	98.6	98.6	98.6	98.6	98.4
Building materials	105.7	105.2	104.8	104.2	103.3	102.7	102.6	102.4	101.7
Chemicals and allied products	85.8	85.9	85.9	85.7	85.5	85.0	85.0	85.1	84.6
Housefurnishing goods	96.9	96.8	96.4	95.9	95.8	95.5	95.4	95.3	94.3
Miscellaneous	84.1	83.6	83.1	83.0	82.3	81.8	81.7	81.3	81.2
Raw materials	88.1	86.9	86.7	87.4	87.0	86.4	85.5	85.1	84.9
Semimanufactured articles	89.7	89.4	89.5	88.9	88.5	87.8	87.6	87.3	87.4
Manufactured products	92.2	91.8	91.3	91.0	90.7	90.5	90.0	89.9	89.4
All commodities other than farm products	91.0	90.7	90.3	90.0	89.7	89.3	88.9	88.8	88.5
All commodities other than farm products and foods	91.1	90.9	90.7	90.6	90.2	90.0	89.7	89.5	89.2

Trend of Employment and Pay Rolls

SUMMARY OF REPORTS FOR AUGUST 1941

Total Nonagricultural Employment

TOTAL civil nonagricultural employment in August amounted to 39,564,000, a gain of 283,000 since July, 1,188,000 since August 1929, and 3,662,000 since August 1940. These figures do not include CCC enrollees, workers on WPA or NYA projects, or the armed forces. August marked the fifth consecutive month in which employment had exceeded all previous levels.

The increase in employment in the first year of the defense program was approximately equal to the gain experienced from the spring of 1933 to the spring of 1934. The problem in 1933–34, however, was that of putting unused resources back to work, whereas in the present emergency it has been necessary to build and equip new plants, to train hundreds of thousands of workers in new skills, and to adapt mass-production methods to the manufacture of products which previous to the defense program had not reached the mass-production stage. This huge increase in employment was all the more remarkable in view of the fact that nearly a million and a half men were inducted into the armed forces during the past year.

Unemployment declined from nearly 9,000,000 persons in June 1940 (the beginning of the defense program) to about 5,300,000 in August 1941, according to the monthly sample enumeration of the labor force made by the WPA. Current employment opportunities, however, have resulted in a sharp expansion of the labor force as substantial numbers of women, retired workers, and youths have entered the labor market.

All major branches of nonagricultural employment showed gains over August 1940, the largest being in manufacturing, where 2,005,000 more workers were employed than a year ago. Construction employment increased by 478,000 over this period, reflecting gains both in defense construction and in private building. Trade employment rose 375,000 over the year as a result of increased consumer expenditures following substantially larger factory pay-roll disbursements and augmented farm income. Sizable advances also took place in transportation and public utilities and in the Federal, State, and local

government services. The armed forces of the Nation, which are not included in the above nonagricultural employment figures, reached a total of 1,944,000 in August, a rise of 1,395,000 since August of last year.

Emergency employment increased 64,000 over the month as a result of the following changes: An increase of 87,000 in the military service and decreases of 12,000 on work relief projects of the Work Projects Administration, 4,000 on the out-of-school work program of the National Youth Administration, and 7,000 in the Civilian Conservation Corps.

Industrial and Business Employment

Employment in the strategic industries handling a greater part of the defense production orders continued to expand in August. The aggregate gain in 18 important defense industries since the beginning of the defense program in June 1940 amounted to 975,000 wage earners or 60 percent, while for all manufacturing industries combined the increase was 2,345,000, or 29 percent. Among the key defense industries which reported substantial employment gains between July and August were aircraft; electrical machinery; blast furnaces, steel works, and rolling mills; shipbuilding; machine-tool accessories; and brass, bronze, and copper products. The gain in shipbuilding employment was smaller than in preceding months because of the temporary closing of one large shipyard pending the settlement of labor difficulties. The canning and preserving industry reported a larger-than-seasonal increase of 78,300 wage earners, resulting largely from Army and Navy and lease-lend purchases.

The automobile industry reported a larger-than-seasonal decrease of 70,800 wage earners, reflecting the change-over to 1942 model production. Employment in the industry, however, was at an unprecedented high level in July. Aluminum-ware and die-casting firms continued to report employment decreases owing to inability to secure materials because of priority rulings. The silk and rayon and hosiery industries reported substantial decreases in employment because of the "freezing" of silk stocks. Firms engaged in other lines of manufacturing, notably the metal-consuming industries, also reported significant shortages of raw materials.

The advance in employment and pay rolls for all manufacturing industries combined carried the indexes to the highest levels on record (132.8 and 157.8 percent, respectively, of the 1923–25 average). The increase over the year interval was twice as large in pay rolls as in employment because of substantial increases in working hours, overtime premiums, and wage rates. Although employment in most of the individual durable-goods industries showed gains between July and August, the group as a whole showed no change, largely because of

the offsetting decline in automobile employment. Pay rolls in the durable-goods group, however, showed a slight rise. The nondurable-goods group as a whole showed gains of about 3 percent in employment and 4 percent in pay rolls.

Employment and pay-roll gains over the month interval were general in the mining industries. In wholesale trade the gains were of larger-than-seasonal proportions, while in retail trade employment and pay rolls fell slightly. Private building construction employment and pay rolls increased by less than the usual amount between July and August, but were respectively 15 percent and 27 percent higher than a year ago.

A preliminary report of the Interstate Commerce Commission for class I steam railroads showed an employment gain of 1.7 percent between July and August, the total number employed in August being 1,207,569. Corresponding pay-roll figures for August were not available when this report was prepared. For July they were $197,166,275, an increase of $9,301,519 since June. About two-thirds of this increase was due to the fact that July covered 31 days while June had only 30 days.

Hours and earnings.—The average hours worked per week by manufacturing wage earners were 41.0 in August, an increase of 1.8 percent since July. The corresponding average hourly earnings were 74.5, a gain of 0.2 percent over the preceding month. The average weekly earnings of factory wage earners (both full- and part-time combined) were $31.65, an increase of 1.6 percent since July. Eight of the 16 nonmanufacturing industries regularly surveyed reported increases in average weekly earnings. Of the 14 nonmanufacturing industries for which man-hours are available, 10 showed gains in average hours worked per week and 9 reported increases in average hourly earnings. Wage-rate increases averaging 7.3 percent and affecting more than a quarter of a million wage earners were reported by about 800 manufacturing plants out of a reporting sample of approximately 34,000 plants employing more than 7,600,000 wage earners. Substantial numbers of workers received pay raises in the following industries: Meat packing; agricultural implements; shipbuilding; engines; aircraft; brass, bronze, and copper products; woolen and worsted goods; and automobiles. Wage-rate increases reported for nonmanufacturing industries affected about 30,000 workers, of whom about half were employed by public utilities. As the Bureau's survey does not cover all establishments in an industry and furthermore, as some firms may have failed to report wage changes, these figures should not be construed as representing the total number of wage changes occurring in manufacturing and nonmanufacturing industries.

Employment and pay-roll indexes and average weekly earnings for August 1941 are given in table 1 for all manufacturing industries combined and selected nonmanufacturing industries, for water transportation and for class I railroads. Percentage changes over the month and year intervals are also given.

TABLE 1.—*Employment, Pay Rolls, and Earnings in All Manufacturing Industries Combined and in Nonmanufacturing Industries, August 1941 (Preliminary Figures)*

Industry	Employment			Pay rolls			Average weekly earnings		
	Index August 1941	Percentage change from—		Index August 1941	Percentage change from—		Average in August 1941	Percentage change from—	
		July 1941	August 1940		July 1941	August 1940		July 1941	August 1940
All manufacturing industries combined [1]	(*1923–25=100*) 132.8	+1.8	+23.6	(*1923–25=100*) 157.8	+3.4	+49.6	$31.65	+1.6	+21.0
Class I steam railroads [2]	(*1935–39=100*) 118.3	+1.7	+13.9	(*1935–39=100*) [3]	[3]	[3]	[3]	[3]	[3]
Coal mining:	(*1929=100*)			(*1929=100*)					
Anthracite [4]	50.0	+1.6	+.2	51.1	+46.6	+54.2	33.56	+44.3	+53.8
Bituminous [4]	92.5	+2.5	+6.8	115.4	+10.6	+39.9	33.35	+7.9	+31.0
Metalliferous mining [4]	80.0	+1.3	+11.9	86.5	+9.1	+26.3	34.05	+7.7	+12.9
Quarrying and nonmetallic mining	54.1	+2.3	+11.4	59.5	+6.7	+31.8	27.47	+4.3	+18.3
Crude-petroleum production	62.4	+.4	−1.9	61.3	−.3	+4.0	35.02	−.6	+6.0
Public utilities:									
Telephone and telegraph [6]	89.1	+.9	+12.7	115.6	−.1	+15.1	[7]31.70	−1.1	+2.1
Electric light and power [6]	95.3	+.7	+2.5	115.3	+1.5	+6.7	[7]36.58	+.7	+4.1
Street railways and busses [6 8]	69.6	+.2	+1.7	77.8	+2.6	+10.4	[7]36.38	+2.4	+8.6
Trade:									
Wholesale [9]	95.7	+1.6	+6.2	89.2	+1.3	+13.3	[7]32.38	−.2	+6.7
Retail [6]	96.4	−.3	+8.7	93.6	−.4	+14.8	[7]22.50	−.1	+5.7
Hotels (year-round) [4 10]	94.8	+.3	+4.9	89.0	+1.6	+10.2	[7]16.23	+1.3	+5.1
Laundries [4]	114.6	−1.0	+11.5	104.7	−1.8	+15.7	19.00	−.8	+3.7
Dyeing and cleaning [4]	118.5	−2.6	+11.1	91.6	−5.0	+16.1	21.39	−2.4	+4.5
Brokerage	[3]	+.7	−10.9	[3]	+.5	−3.7	[7]39.48	−.2	+8.1
Insurance	[3]	+.6	+1 7	[3]	+.3	+5.1	[7]37.26	−.3	+3.4
Building construction	[3]	+2.1	+15.3	[3]	+3.3	+27.2	35.76	+1.2	+10.3
Water transportation [11]	79.3	+.9	−2.1	[3]	[3]	[3]	[3]	[3]	[3]

[1] Indexes adjusted to preliminary 1939 Census of Manufactures. See table 9 in December 1940 "Employment and Pay Rolls" for comparable series back to January 1919.

[2] Preliminary; source—Interstate Commerce Commission.

[3] Not available.

[4] Indexes adjusted to 1935 census. Comparable series back to January 1929 presented in January 1938 issue of the pamphlet, "Employment and Pay Rolls." See also table 7 of October 1940 pamphlet for revised figures for anthracite mining, February to September 1940, inclusive.

[5] See table 7 of February 1941 pamphlet for revised figures January 1938 to January 1941.

[6] Retail-trade indexes adjusted to 1935 census and public-utility indexes to 1937 census. Not comparable with indexes published in pamphlets prior to January 1940 or in the Monthly Labor Review prior to April 1940. Revised series available upon request.

[7] Average weekly earnings not strictly comparable with figures published in issues of the pamphlet dated earlier than January 1938, or in the Monthly Labor Review dated earlier than April 1938 (except for the January figures appearing in the March issue), as they now exclude corporation officers, executives, and other employees whose duties are mainly supervisory.

[8] Covers street railways and trolley and motorbus operations of subsidiary, affiliated, and successor companies.

[9] Index adjusted to 1933 census. Comparable series in November 1934 and subsequent issues of pamphlet of February 1935 and subsequent issues of Monthly Labor Review.

[10] Cash payments only; the additional value of board, room, and tips cannot be computed.

[11] Based on estimates prepared by the United States Maritime Commission.

Public Employment

The upward trend of employment on construction projects financed from appropriations to regular Federal agencies continued during the month ending August 15, with an increase of 8,000 over July. Sizable gains were reported on the construction of naval and cargo vessels and on reclamation projects, while decreases were reported on residential and nonresidential building construction. Of the 880,000 construction workers employed on projects financed from regular funds, approximately three-fourths were employed on defense projects and one-fourth on nondefense projects. Pay-roll disbursements on all types of projects amounted to $138,921,000.

Provided with funds appropriated by the Lanham Act, the United States Housing Authority began work on a number of defense housing projects. As a consequence of this, employment on projects under the Housing Authority rose to 44,200 in the month ending August 15, an increase of 8,000 from the preceding month. Defense housing projects furnished employment to 12,000 building-trades workers and 32,200 were working on nondefense housing. Wage payments on all types of projects totaled $5,034,000.

Employment on construction projects financed from Public Works Administration funds declined from 7,500 to 5,900 in the month ending August 15. Pay rolls totaled $672,000.

Approximately 14,700 men were employed on construction projects financed by the Reconstruction Finance Corporation. This represents an increase of 1,300 over the month ending July 15. Defense projects accounted for 11,700 workers and nondefense projects for 3,000. Pay-roll disbursements of $2,347,000 were $439,000 more than in July.

For the seventh consecutive month employment on work relief projects of the Work Projects Administration showed a decline. In August 1,043,000 persons were employed on work relief projects, as compared with 1,055,000 in July. Approximately 350,000 persons were working on defense projects and 693,000 on nondefense projects. Wage payments of $62,100,000 were $6,100,000 less than in July.

Employment on the out-of-school work program of the National Youth Administration was curtailed by 4,000 in August. Pay-roll disbursements to the 318,000 workers amounted to $7,565,000.

The number of workers in camps of the Civilian Conservation Corps declined 7,000 in August. Of the 203,400 on the pay roll, 174,000 were enrollees; 1,200, educational advisers; 100, nurses; and 28,100, supervisory and technical employees. Pay rolls amounted to $9,636,000.

In the regular services of the Federal Government, increased employment was reported in the executive and military branches while decreases were reported in the judicial and legislative branches.

A summary of employment and pay-roll data in the regular Federal services and on projects financed wholly or partially from Federal funds is given in table 2.

TABLE 2.—*Summary of Employment and Pay Rolls in Regular Federal Services and on Projects Financed Wholly or Partially from Federal Funds, August 1941 (Preliminary Figures)*

Class	Employment			Pay rolls		
	August 1941	July 1941	Percentage change	August 1941	July 1941	Percentage change
Federal services:						
Executive [1]	1,409,036	1,391,739	+1.2	$209,946,364	$206,077,306	+1.9
Judicial	2,578	2,637	−2.2	641,348	647,810	−1.0
Legislative	6,038	6,142	−1.7	1,328,768	1,334,763	−.4
Military	1,944,094	1,857,442	+4.7	129,582,075	122,384,486	+5.9
Construction projects:						
Financed by regular Federal Appropriations	880,462	872,663	+.9	138,920,605	121,148,189	+14.7
Defense	651,365	653,779	−.4	114,497,470	98,908,072	+15.8
Other	229,097	218,884	+4.7	24,423,135	22,240,117	+9.8
USHA low-rent housing	44,191	36,543	+20.9	5,034,069	3,849,428	+30.8
Defense	12,023	2,765	+334.8	1,422,272	290,522	+389.6
Other	32,168	33,778	−4.8	3,611,797	3,558,906	+1.5
Financed by PWA [2]	5,909	7,456	−20.7	672,435	807,747	−16.8
Financed by RFC [3]	14,670	13,398	+9.5	2,347,076	1,908,303	+23.0
Defense	11,644	10,719	+8.6	1,969,029	1,587,160	+24.1
Other	3,026	2,679	+13.0	378,047	321,143	+17.7
Work projects:						
Administration projects	1,042,565	1,055,012	−1.2	62,100,000	68,200,000	−8.9
Defense	349,719	357,593	−2.2	(4)	(4)	
Other	692,846	697,419	−.7	(4)	(4)	
National Youth Administration:						
Student work program	238	2,309	−89.7	1,350	12,375	−89.1
Out-of-school work program	318,388	322,736	−1.3	7,564,639	7,163,747	+5.6
Civilian Conservation Corps	203,450	210,121	−3.2	9,635,781	10,388,164	−7.2

[1] Includes force-account and supervisory and technical employees shown under other classifications to the extent of 202,075 employees and pay-roll disbursements of $29,816,240 for August 1941, and 195,657 employees and pay-roll disbursements of $29,202,412 for July 1941.

[2] Data covering PWA projects financed from National Industrial Recovery Act funds, Emergency Relief Appropriation Acts of 1935, 1936, 1937 funds, and Public Works Administration Appropriation Act of 1938 funds are included. These data are not shown under projects financed by the Work Projects Administration. Includes 3,165 wage earners and $352,300 pay roll for August 1941; 3,446 wage earners and $358,713 pay roll for July 1941, covering Public Works Administration Projects financed from Emergency Relief Appropriation Acts of 1935, 1936, and 1937 funds. Includes 2,950 wage earners and $338,200 pay roll for August 1941 financed from funds provided by the Public Works Administration Appropriation Act of 1938.

[3] Includes 595 employees and pay-roll disbursements of $95,544 for August 1941; 467 employees and pay-roll disbursements of $93,869 for July 1941 on projects financed by the RFC Mortgage Co.

[4] Pay-roll data not available.

DETAILED REPORTS FOR INDUSTRIAL AND BUSINESS EMPLOYMENT, JULY 1941

IN ORDER to avoid delay in publication this section is omitted from this issue of the Monthly Labor Review. Those desiring this detailed information will find it in the July issue of the monthly pamphlet "Employment and Pay Rolls," copies of which will be gladly sent upon request to the Bureau.

Recent Publications of Labor Interest

OCTOBER 1941

Child Labor

State child labor legislation, 1940. By Gertrude Folks Zimand. New York, National Child Labor Committee, [1941?]. 12 pp.; mimeographed.
Summarizes defeated measures as well as legislation enacted.

The hazardous-occupations program—an administrative function of the [United States] Children's Bureau. By Elizabeth S. Johnson and Saul Wallen. (In The Child, U. S. Children's Bureau, Washington, July 1941, pp. 21–23.)

The hazards of logging 'and 'sawmilling 'employment for young workers; The hazards of woodworking-machine employments for young workers. Reports of investigations made under child-labor provisions of Fair Labor Standards Act of 1938. Washington, U. S. Children's Bureau, Industrial Division, 1941. 111 and 73 pp.; mimeographed.
As a result of these investigations, the chief of the United States Children's Bureau issued hazardous-occupation orders, effective August 1, 1941, declaring that, with some exceptions, all occupations in logging and sawmilling, and certain occupations in connection with operation of woodworking machinery, are hazardous for young persons between 16 and 18 years of age (see August 1941 Monthly Labor Review, pp. 396, 397).

Cooperative Movement

Fundamentals of consumer cooperation. By V. S. Alanne. Superior, Wis., Cooperative Publishing Association, 1941. 111 pp., illus. 7th edition, revised.
Simple, clearly written exposition of the cooperative philosophy, giving also clear-cut classifications of consumers' cooperatives, both local and federated, and an analysis of the differences between private stock companies and consumers' cooperatives.

Agricultural cooperation and national legislation. By Tom G. Stitts and Wm. C. Welden. Washington, U. S. Farm Credit Administration, 1940. 24 pp. (Circular A–20.)
Explains briefly the Federal legislation affecting agricultural cooperatives: The Capper-Volstead Act, Bituminous-Coal Act, various farm loan acts, exemptions under Federal income tax, etc.

Amounts and cost of credit extended by cooperative exchanges. By Ralph E. Mercer and Herman M. Haag. Columbia, Mo., University of Missouri, Agricultural Experiment Station, 1940. 35 pp. (Bull. 415.)
Based on data from 87 cooperative exchanges (i. e., cooperative associations buying from farmers various farm products and purchasing for their needs groceries and farm supplies). The report showed that for these exchanges the cost of extending credit amounted to 3 cents for every dollar of sales on credit. "Since the average term of the credit outstanding was 69 days, it would have been necessary to charge 16 percent interest on receivables to defray this cost." Of the total credit cost, half represented losses from bad debts, one-third was interest, and accounting and collection expenses made up the other sixth.

Eighth annual report of Farm Credit Administration, 1940. Washington, 1941. 292 pp., charts.
Contains statistical and other data on cooperative marketing and purchasing among farmers during 1939–40, and on farmers' cooperative associations writing

EDITOR'S NOTE.—The Bureau of Labor Statistics does not distribute the publications to which reference is made in this list, except those issued by the Bureau itself. For all others, please write to the respective publishing agencies mentioned.

insurance against hail, lightning, windstorm, and fire. One section deals with credit unions formed under the Federal Credit Union Act, and gives tables showing, by States, the number of credit unions formed each year since the passage of the act in 1934, and the number of members, the share capital, and the loans outstanding; similar data are shown by type of membership. Data are given also for the various systems of agricultural credit.

Farmers' cooperative business organizations in Canada, 1939–40. By A. E. Richards. (In Economic Annalist, Department of Agriculture, Ottawa, June 1941, pp. 37–40.)

Covers 1,151 farmers' cooperatives of various kinds, with 450,453 members at end of fiscal year 1939–40. These had a total business during the year amounting to $236,322,466. Cooperative purchase of supplies for members accounted for $16,661,816, and was carried on by 550 associations with 56,351 members.

Pequena história da "Cinta Dourada" Paulistana: De como o cooperativismo liquidou os carrascais e revolucionou o regime alimentar de São Paulo. (In Economía, São Paulo, Brazil, June 1941, pp. 30–33.)

Annual report for 1940 of the manager of the Cooperativa Agrícola de Cotia (Agricultural Cooperative of Cotia, said to be the most important of its kind in South America), composed of the small farmers around São Paulo; the report deals with activities in connection with buying, selling, credit, social assistance, transportation, technical improvement of labor, scientific improvement of the land, and Government supervision over production.

Activities of Washington (D. C.) Self-Help Exchange. Washington, U. S. Bureau of Labor Statistics, 1941. 14 pp., illus. (Serial No. R. 1343, reprint from July 1941 Monthly Labor Review.)

Cost and Standards of Living

Family expenditures for furnishings and equipment, five regions. By Day Monroe and others. Washington, U. S. Bureau of Home Economics, 1941. 212 pp., charts. (Consumer purchases study, urban, village, and farm series; Department of Agriculture miscellaneous publication No. 436.)

Quantity and cost budget for a single working woman—prices for San Francisco, March 1941. Berkeley, University of California, Heller Committee for Research in Social Economics, 1941. 10 pp.; mimeographed.

A budget for a single working woman was added in 1939 to the family budgets which the Heller Committee has priced for a number of years. The budget is designed for a woman living alone and supporting no dependents, who is employed in San Francisco in a relatively low-skilled clerical or sales occupation or in a factory, and is intended to provide "a minimum of adequate and wholesome living." Minor changes from the 1940 pricings have been included in the 1941 budget.

Regional changes in living costs (Canada, August 1939 to April 1941). Ottawa, Dominion Bureau of Statistics, 1941. 4 pp.; mimeographed.

Includes index numbers for 8 cities.

Budgetting for the soldier's family. Ottawa, Canadian Welfare Council, 1941. 17 pp. (Military service memo. No. IV, 1941.)

El costo de la vida de los obreros del ferrocarril de Antioquia. By Francisco de Abrisqueta. (In Anales de Economía y Estadística, Contraloría General, Dirección Nacional de Estadistica, Bogotá, Supplement to No. 3 of Vol. IV, March 25, 1941, pp. 1–85; map, charts.)

Detailed account of an official investigation of cost of living of railway workers in the region of Antioquia, Colombia, based upon family account books kept by 279 families, which included 1,992 persons, from June 10 to July 11, 1939, with index numbers established during the investigation. A bibliography is appended.

Report on cost of living survey carried out in Kingston, Jamaica, by the Labor Department, August–November 1939. Kingston, Labor Department, 1940. 24 pp.

The report deals with 486 households.

Education and Training

All-out defense job training—a call to dynamic action. Los Angeles, University of California, School of Education, 1941. 48 pp.

Covers findings of a group of city superintendents of schools, who made a tour of Pacific Coast cities in the spring of 1941 to study the regular school programs of vocational education and particularly the national-defense job-training programs. The training problem presented by the immediate emergency is outlined, and suggestions offered for meeting it.

List of occupations approved by Office of Production Management for vocational training courses for defense workers. Washington, U. S. Office of Education, 1941. 205 pp.

Employee training in the public service. Chicago, Civil Service Assembly of the United States and Canada, 1941. xvi, 172 pp., bibliography.

The training with which this book is concerned is that given after employment to aid employees "to gain effectiveness in their present or future work through the development of appropriate habits of thought and action, skills, knowledge, and attitudes." The report attempts to present sound principles and methods for the practical guidance of those concerned with the training of employees.

Training workers and supervisors. By Charles Reitell. New York, Ronald Press Co., 1941. 182 pp., bibliography.

Principles and methods for selection of new employees, specific methods of training, training for better performance as to both quality and quantity of output, and training that promotes better human relations in industry, are the respective topics of the four parts of the book.

Practices relating to apprentice training programs in iron and steel industry. New York, American Iron and Steel Institute, 1941. Various paging.

Digest of annual reports of State Boards for Vocational Education to U. S. Office of Education, Vocational Division, fiscal year ended June 30, 1940. Washington, U. S. Office of Education, 1941. 95 pp. and tables.

Includes recent opinions and rulings relating to the program of vocational education carried on under Federal grants.

Factory Inspection and Workshop Practice

Annual report of Chief Inspector of Factories [Great Britain], for year 1939. London, 1941. 57 pp. (Cmd. 6251.)

Data on industrial accidents and diseases in British factories in 1939, taken from this report, were published in the May 1941 Monthly Labor Review (p. 1212).

Workshop practice. A selected list of books, now in print, compiled by William G. Burrell. London, Maurice Marston (for National Book Council), 1941. 6 pp.

Workshop sense. By W. A. J. Chapman. London, Edward Arnold & Co., 1941. 58 pp., diagrams.

An effort to help entrants into war industry to understand their new conditions of life. The author expresses the opinion that much that is helpful can be transmitted through the written word.

Health and Industrial Hygiene

The National health program and medical care in the United States—selected recent references. Compiled by Ruth Fine. Washington, U. S. Department of Labor, Library, June 1940, 25 pp.; supplement, August 1941, 8 pp. Mimeographed.

Special report of New York State Commission to Formulate a Long Range Health Program on the State-wide health preparedness conference sponsored by New York State Defense Council and Health Commission. Albany, 1941. 194 pp. (Legislative document, 1941, No. 64.)

Contains the papers and addresses presented at the conference and a list of members of the official advisory health-preparedness committees in the different counties of the State.

The health of St. Louis youth. By Noma Fuller. St. Louis, St. Louis Youth Commission, 1940. 106 pp., charts; mimeographed.

Largely based on the findings of the National Health Survey made in 1935–36, this report deals with various types of illness found among young persons in the community covered, the presence of physical impairments, and the number and types of accidents occurring at the younger ages.

Occupation hazards and diagnostic signs: A guide to impairments to be looked for in hazardous occupations. By Louis I. Dublin and Robert J. Vane. Washington, U. S. Department of Labor, Division of Labor Standards, 1941. 70 pp. (Bull. No. 41; revision of Bureau of Labor Statistics Bull. No. 582.)

Symposium on industrial health, Medical College of Virginia, Richmond, September 12–13, 1940. Richmond, Medical College of Virginia, [1941?]. 112 pp.; mimeographed.

Medical service in small plants, physical examination of workers, nutrition, and a number of occupational diseases, were among the topics of discussion.

Memorandum on medical supervision in factories [in Great Britain]. London, Ministry of Labor and National Service, 1941. 8 pp. (Factory Department form 327, November 1940.)

Describes medical examinations to be given employees, treatment, and other activities prescribed under earlier law and defense regulations.

Housing

Coordination of local management programs for Government defense housing projects. Washington, U. S. Office for Emergency Management, Division of Defense Housing Coordination, [1941]. 12 pp.; processed.

An outline of management policy offered as a starting point toward a solution of the management problems that may be encountered by various agencies in executing the housing program.

Manual of operations for Division of Defense Housing Coordination [U. S. Office for Emergency Management]. Washington, U. S. Office for Emergency Management, Division of Defense Housing Coordination, 1941. 61 pp., charts; mimeographed.

Discusses problems and policies of the defense housing program and describes the agencies and methods for carrying out the work.

Summary of standards for defense housing. Washington, U. S. Office for Emergency Management, Division of Defense Housing Coordination, 1941. 15 pp.; processed.

Standards for permanent and demountable and portable housing.

Papers presented at the conference on expansion of industrial communities with regard to housing and city planning, University of Michigan, November 29 and 30, 1940. Ann Arbor, University of Michigan, College of Architecture and Design, [1941?]. 50 pp.; mimeographed.

Suggested ordinance for regulation of trailer coach parking and trailer parks. Washington, U. S. Office of Price Administration and Civilian Supply, Consumer Division, 1941. 12 pp.; mimeographed.

The ordinance proposed is designed to lay down minimum standards for the safety, health, and convenience of trailer families and for the protection of the community.

Waverly: A study in neighborhood conservation. Washington, Federal Home Loan Bank Board, 1940. 97 pp., maps, plans, illus.

A study of a particular neighborhood in Baltimore, Md., showing causes of blight and recommending a program of improvement. This report attempts to provide a general remedy that can be successfully applied in other urban communities throughout the country.

Two decades of building and loan associations in Pennsylvania. By David Thomas Rowlands. Philadelphia, University of Pennsylvania, 1940. 135 pp., bibliography, charts, pasters. (Reprinted from The Pennsylvania Bulletin, Vol. II, Nos. 6–12, and Vol. VIII, Nos. 1–4.)

Gives statistics of development and discusses terms of maturities, senior and junior liens, types of operating plans, capital structure, and size. Data cover the decades 1916–26 and 1926–36.

Industrial Accidents and Accident Prevention

Accident facts, 1941 edition. Chicago, National Safety Council, Inc., 1941. 112 pp., charts.

Information on all kinds of accidents, brought together from various sources, mainly official.

Kansas accidental deaths, 1940. Topeka, State Board of Health, 1941. 18 pp., chart.

Of the 1,362 accidental deaths in Kansas in 1940, home accidents accounted for the largest number—530, of which 317 were caused by falls. There were 187 industrial deaths, agriculture leading with 89. A tabulation of deaths from farm accidents during the decade 1930–1940, by cause, shows that, of the total of 1,003 such deaths, machinery was responsible for 284 (the tractor for 104), and injury by farm animals for 192, accidental falls coming third with 102.

Accidents in Tennessee coal mines, 1891–1940. By Frank E. Cash and Claud P. Dempsey. Washington, U. S. Bureau of Mines, 1941. 9 pp.; mimeographed. (Information circular 7167.)

Comparing the accident experience in Tennessee coal mines with that of all coal mines in the United States, the report shows that in the decade 1930–1939 the accident fatality rate for Tennessee coal mines was 1.79 per million man-hours worked, as compared with 1.87 for the United States as a whole. The Tennessee rate for the decade, however, was higher than for any other comparable period since 1891, except 1900–1909, when the rate was 2.24.

Use of rock dust in bituminous-coal mines, 1930–38 (a statistical survey). By W. W. Adams. Washington, U. S. Bureau of Mines, 1940. 11 pp.; mimeographed. (Report of investigations, 3543.)

Mechanized mining brings new electrical hazards. By E. J. Gleim and H. B. Brunot. Washington, U. S. Bureau of Mines, 1941. 11 pp., diagrams; mimeographed. (Information circular 7160.)

Certain electrical hazards are described and preventive measures suggested.

Control of welding hazards in defense industries. Washington, U. S. Department of Labor, Division of Labor Standards, 1941. 15 pp., illus. (Special bull. No. 5.)

Industrial accident prevention in Canada: Inspection services of employers' associations. By Henri Binet. (In International Labor Review, Montreal, Canada, July 1941, pp. 30–41.)

Industrial Home Work

Industrial home work in the United States. By Frieda S. Miller. (In International Labor Review, Montreal, Canada, January 1941, pp. 1–50.)

Review of the development of industrial home work in the United States from the close of the Colonial period, when it first appeared, to the present; attempts to regulate it; protection of the workers; status under minimum-wage laws; etc.

Industrial home-work conditions in the candlewick-bedspread and lace industries. Washington, U. S. Children's Bureau, 1941. 50 pp.; mimeographed.

Report of a survey of conditions in these home-work industries in the latter part of 1939 made at the request of the Wage and Hour Division of the United States Department of Labor.

Labor and Social Legislation

Labor laws and their administration, 1940: Proceedings of twenty-sixth convention of International Association of Governmental Labor Officials, New York City, September 1940. Washington, U. S. Bureau of Labor Statistics, 1941. 260 pp. (Bull. No. 690.)

Digest of war legislation in Australia. Prepared under general editorship of M. C. Tenison Woods. Sydney, Butterworth & Co. (Australia), Ltd., 1940 and 1941. Loose-leaf.

Includes laws, regulations, orders, etc., and reported decisions of the courts. The material is presented chronologically by months from September 1939 through May 1941.

Labor in the [British] Government: A record of social legislation in wartime. London, Labor Party, 1941. 14 pp.
Traces the development of war labor policy and the social measures taken to protect the working people.

Aplicação rural da justiça social. By João C. Fairbanks. (In Economía, São Paulo, June 1941, pp. 25–29.)
Summary of legislative provisions in Brazil protecting the rights of the agricultural workers.

New tendencies in Latin American constitutions. By Juan Clemente Zamora (In Journal of Politics, Gainesville, Fla., August 1941, pp. 276–296.)
The section of this article dealing with social and labor conditions (collective bargaining, hours of work, wages, paid vacations, etc.), and social insurance, analyzes the present constitutions of Bolivia (1936), Brazil (1937), Colombia (1936), Cuba (1940), and Mexico (1917).

Labor Offices

Labor offices in the United States and in Canada, May 15, 1941. Washington, U. S. Bureau of Labor Statistics, 1941. 37 pp. (Bull. No. 681.)

The development and functions of the New York State Department of Labor. Albany, Department of Labor, 1941. 34 pp.; mimeographed.

Man meets job—how Uncle Sam helps. By Philip S. Broughton. New York, Public Affairs Committee, Inc., 1941. 32 pp., charts. (Public affairs pamphlet No. 57.)
The pamphlet tells why the U. S. Employment Service was formed and how it functions in the present defense emergency.

Labor Organization and Activities

Industrial Union of Marine and Shipbuilding Workers. By John Green, president. (In Labor Information Bulletin, U. S. Bureau of Labor Statistics, Washington, August 1941, pp. 7–10.)

Textile Workers Union of America. By Emil Rieve, president. (In Labor Information Bulletin, U. S. Bureau of Labor Statistics, Washington, July 1941, pp. 7–10; illus.)

British working class politics, 1832–1914. By G. D. H. Cole. London, George Routledge & Sons, Ltd., 1941. 320 pp., bibliography.
The present prominent place of the Labor Party in British affairs gives special interest to this background study. An appendix gives details of labor and related representation in Parliament from 1800 to 1914. There is a summary chapter on recent developments.

Tenth annual report of Irish Labor Party, incorporating report of administrative council for year 1940 and report of proceedings of tenth annual conference, April 21–23, 1941. Dublin, 1941. 195 pp.

Nutrition

A national nutrition policy and the wage earner. By Frances Perkins, Secretary of Labor. Washington, U. S. Bureau of Labor Statistics, 1941. 8 pp. (Serial No. R. 1340, reprint from July 1941 Monthly Labor Review.)

Nutrition and national health. By Charles E. Noyes. Washington, Editorial Research Reports, 1013 Thirteenth Street NW., 1941. 15 pp. (Vol. 1, 1941, No. 18.)
Presents information on the amounts of vitamins and minerals necessary for health and the vitamin values of various foods, and suggests methods for the improvement of food habits among the general population.

Nutrition and the war. By Geoffrey Bourne. Cambridge, England, Cambridge University Press, 1940. 126 pp.
Shows values of different foods in the making of a balanced diet and calories per unit of various foodstuffs.

Occupations and Occupational Adjustment

Air transportation. Chicago, U. S. National Youth Administration for Illinois, 1941. 42 pp., bibliography, illus.; mimeographed. Rev. ed. (Occupational information research reports.)

This is the third edition of the study, the two preceding reports having been issued in 1936 and 1938, respectively.

The commercial artist. Lansing, U. S. National Youth Administration for Michigan, 1940. 10 pp. (Youth opportunity series, No. 5.)

Under uses of commercial art are listed commercial advertising, industrial designing, handicraft, textile designing, photography, cartooning, ceramics, jewelry designing, fashion drawing, and costume designing.

Youth's chances in the beauty shop. Lansing, National Youth Administration for Michigan, 1940. 9 pp. (Youth opportunity series, No. 2.)

Tells how to become a licensed beauty-shop operator and describes briefly the duties and working conditions of this occupation.

Professional aptitude tests in medicine, law, and engineering. By I. L. Kandel. New York, Columbia University, Teachers College, 1940. 78 pp.

Manual of job evaluation: Procedures of job analysis and appraisal. By Eugene J. Benge, Samuel L. H. Burk, and Edward N. Hay. New York and London, Harper & Bros., 1941. 198 pp.

The manual deals primarily with job analysis and with that method of job evaluation known as "factor comparison." It is not intended as a treatise on wages but is planned to help executives and workers who are seeking a practical method for determination of equitable wage and salary rates.

Toward job adjustment, with specific reference to vocational problems of racial, religious, and cultural minority groups. By Lester B. Granger, Louis H. Sobel, William H. H. Wilkinson. New York, Welfare Council of New York City, 1941. 78 pp., bibliography.

Prices and Price Control

Geographical differentials in prices of building materials. By Walter G. Keim. Washington, Government Printing Office, 1940. 459 pp., charts. (U. S. Temporary National Economic Committee, Investigation of concentration of economic power, monograph No. 33.)

Prices and price indexes supplement, 1940. Ottawa, Dominion Bureau of Statistics, 1941. 107 pp.; mimeographed.

Monthly and annual average prices in Canada are reported, with corresponding index numbers on a 1926 base.

Price inflation and price controls in the food industry. By Hector Lazo. Washington, Cooperative Food Distributors of America, 1941. 31 pp.

Price inflation and price controls in the food industry are studied and development of voluntary cooperation between government and business is discussed. A brief bibliography is appended.

Some objectives and problems of price control. By Montell Ogdon. (In Foreign Agriculture, U. S. Office of Foreign Agricultural Relations, Washington, July 1941, pp. 281–298.)

The wartime prices and trade board: A study of consumer protection, under war conditions, in Canada. By William H. Wynne. Washington, U. S. Office for Emergency Management, Office of Price Administration and Civilian Supply, Consumer Division, 1941. 28 pp.; processed. (Bull. No. 13.)

Description of the composition, powers, and duties of the Wartime Prices and Trade Board set up by the Canadian Government to guard against "any undue enhancement in the prices of food, fuel and other necessaries of life," and to ensure "an adequate supply and equitable distribution of such commodities."

Production, Productivity, and Technological Changes

Increasing factory output through better production control; Increasing factory output through better use of employee skills; Defense production problems. New York, American Management Association, 1941. (Production series No. 129, 40 pp.; No. 130, 46 pp.; No. 131, 28 pp.)

These pamphlets include papers by men in managerial posts in prominent American corporations. The points of view presented are significant in their emphasis on nonmechanical factors affecting productivity. The second of the three pamphlets (No. 130) gives points of view of managers relating to such vital questions as the quick training of workers for national defense, the transfer of skills, bonus incentive plans, and dealings with union committees.

Maximum production and employment, January 1935 to June 1940, and under defense. By M. R. Gainsbrugh and I. J. White. (In National Industrial Conference Board Economic Record, New York, July 24, 1941, pp. 307–310.)

Technology in our economy. By Lewis L. Lorwin and John M. Blair. Washington, Government Printing Office, 1941. xvi, 313 pp., charts. (U. S. Temporary National Economic Committee, Investigation of concentration of economic power, monograph No. 22.)

Part I is a summary of previous studies in this field. Part II is a detailed analysis of changes in labor productivity, of the effects of labor-saving technology on the workers, and of the obstacles in the way of the operation of "compensatory forces" for counteracting the technological displacement of workers.

Cotton plantation laborers: A socio-economic study of laborers on cotton plantations in Concordia Parish, Louisiana. By S. Earl Grigsby and Harold Hoffsommer. Baton Rouge, Louisiana State University and Agricultural and Mechanical College, Agricultural Experiment Stations, 1941. 40 pp., charts. (Louisiana bull. No. 328.)

Designed to throw light on problems arising from mechanization, described in terms of "an impending critical situation." Concordia Parish is a cotton-growing section said to be typical of the Mississippi Delta area. The study has an introductory historical survey and gives information on social characteristics of Negro farm laborers, extent and conditions of employment, wage rates, cash earnings, and total income.

Mechanization and its relation to the cost of producing cotton in Texas. By C. A. Bonnen. (In Southwestern Social Science Quarterly, Austin, Tex., June 1941, pp. 67–75.)

The author summarizes some of the sources of information on mechanization and states that Texas and the Cotton Belt have generally lagged far behind other agricultural areas in the adoption of modern farm machinery. It is to this fact that he attributes what he describes as the relatively low economic position of the Cotton Belt. He recognizes the emergence of social and economic problems out of the recent increases in the use of machinery, and states that these call for adjustments in our social and economic institutions but does not indicate the nature of the necessary adjustments.

Productivity trends in milling industry. By Lenore A. Epstein and Harry Brenner. Washington, U. S. Bureau of Labor Statistics, 1941. 12 pp. (Serial No. R. 1344, reprint from July 1941 Monthly Labor Review.)

Savings-Bank Life Insurance

Savings-bank life insurance. Washington, U. S. Department of Labor, Division of Labor Standards, 1941. 22 pp., charts, illus. (Bull. No. 44.)

Description of the savings-bank life insurance system, which enables mutual savings banks to sell life insurance over the counter, prepared in response to a request of the Sixth National Conference on Labor Legislation in November 1939 for "popular material for general distribution" on this subject.

Unemployment Insurance and Relief

An appraisal of the Federal-State system of unemployment compensation: The need for a Federal plan. By William Haber and J. J. Joseph. (In Social Service Review, Chicago, Ill., June 1941, pp. 207–241; also reprinted.)

The authors state their view of the purpose of unemployment compensation, discuss the extent to which they believe this purpose is not met by the existing system, and suggest a program for a national system.

Report of Committee on Employer Experience Rating of Interstate Conference of Employment Security Agencies. [Detroit, multilithed by Michigan Unemployment Compensation Commission], 1940. In 3 parts.

Partial unemployment [New York State]: Administrative studies of unemployment insurance and of the inter-relation of partial and total unemployment benefits, including reports submitted by Industrial Commissioner to the Legislature during the 1939 and 1940 sessions. Albany, Department of Labor, Division of Placement and Unemployment Insurance, 1941. xiv, 311 pp., bibliography, charts. (Special bull. No. 3.)

Report of Dominion Commissioner of Unemployment Relief for fiscal year ending March 31, 1941. Ottawa, Department of Labor, 1941. 41 pp.

Under the Canadian Unemployment and Agricultural Assistance Act of 1940, the Dominion is required to assist the Provinces in supplying direct relief to necessitous persons. The present report deals with the direct relief granted during the last fiscal year, assistance given in maintaining training programs for youths and older persons, the farm employment program, and relief settlement and reestablishment of settlers.

British unemployment programs, 1920–1938. By Eveline M. Burns. Washington, Social Science Research Council, Committee on Social Security, 1941. xx, 385 pp.

Account of Great Britain's search between 1920 and 1938 for satisfactory means of dealing with problems arising from long-continued mass unemployment, such as the expansion of unemployment insurance and provision of transitional payments.

The answer to unemployment. By J. Roy Ellison. Portland, Oreg., Studio Publishing Co., 1941. 187 pp.

Plan for answering the challenge that unemployment presents to both capitalism and democracy. The author's remedy would be to increase national income by taxing production only, which he claims would not result in inflation.

Wages and Hours of Labor

Earnings in seamless-hosiery industry under 32-cent minimum wage. By Frances Jones. Washington, U. S. Bureau of Labor Statistics, 1941. 22 pp. (Serial No. R. 1325, reprint from June 1941 Monthly Labor Review.)

Hourly earnings in lumber and timber products industry. By Harry Ober. Washington, U. S. Bureau of Labor Statistics, 1941. 22 pp. (Serial No. R. 1336, reprint from July 1941 Monthly Labor Review.)

Hours and earnings of employees of independent leaf-tobacco dealers. By Sidney C. Sufrin. Washington, U. S. Bureau of Labor Statistics, 1941. 7 pp. (Serial No. R. 1338, reprint from July 1941 Monthly Labor Review.)

Earnings and hours in processed-waste industry, 1940, by Louis M. Solomon; *Hourly earnings in jute-bagging industry, 1940.* Washington, U. S. Bureau of Labor Statistics, 1941. 8 pp. (Serial No. R. 1326, reprint from June 1941 Monthly Labor Review.)

Hourly earnings in making of wood turnings, shapes, and other wood products. By Victor S. Baril. Washington, U. S. Bureau of Labor Statistics, 1941. 6 pp. (Serial No. R. 1337, reprint from July 1941 Monthly Labor Review.)

Overtime pay in relation to costs and profits. Washington, U. S. Bureau of Labor Statistics, 1941. 9 pp. (Serial No. R. 1341, reprint from July 1941 Monthly Labor Review.)

Hours and efficiency in British industry. By Max D. Kossoris. Washington, U. S. Bureau of Labor Statistics, 1941. 10 pp. (Serial No. R. 1322, reprint from June 1941 Monthly Labor Review.)

Wartime Conditions and Policies

Labor defends America. By Herman Wolf. Washington, American Council on Public Affairs, 1941. 80 pp.

Deals with the national defense organization, labor's responsibilities for participating in national defense, and the main activities of labor organizations and labor leaders in connection with national defense. An appendix gives a list of

public agencies having labor representation, with the names and trade-union connections of labor leaders serving on these agencies. There is a section on British labor and the war.

Labor policy and national defense. By Z. Clark Dickinson. Ann Arbor, University of Michigan, Bureau of Industrial Relations, 1941. 62 pp.; processed. (Bull. No. 12.)

The author concludes that views expressed on avoiding wage problems through controls and compulsory savings are oversimplified. He lists methods of combating inflation.

Labor supply and national defense. [By Peter Waelbroeck.] Montreal, Canada, International Labor Office, 1941. 245 pp. (Studies and reports, Series C, No. 23.)

The report covers Great Britain and the British dominions, France, Germany, Japan, and the United States. Measures to mobilize labor are discussed, by individual country, and conclusions are drawn. It is shown that whatever the policy of labor supply adopted, a number of general principles must be observed in the interest of effectiveness.

Data for Australia, New Zealand, and South Africa, taken from this report, were published in the September 1941 Monthly Labor Review (p. 607).

Plans for reestablishment of ex-service men of present war. Ottawa, Canadian Welfare Council, 1941. 7 pp.; mimeographed. (Military service memo. No. III, 1941.)

Britain's wartime economy, 1940–41. By James Frederick Green. (In Foreign Policy Reports, New York, August 1, 1941, pp. 126–136.)

This summary is largely based on the emergency legislation for control of industry and labor.

Emergency powers in Great Britain. By Paul B. Rava. (In Boston University Law Review, Boston, Mass., June 1941, pp. 403–451.)

Discusses the legal aspects of the emergency powers legislation and cites cases that have come before the courts as a result of the new laws.

U. S. GOVERNMENT PRINTING OFFICE: 1941